



**DREW
SCHOOL
COURSE
CATALOG
2023-2024**



*Drew knows and believes in teenagers.
We engage each student in a process of
intellectual discovery to develop an individual
voice, the confidence to express it, and the
empathy to understand its impact.*



GRADUATION REQUIREMENTS

The Drew four-year curriculum will encompass core academic classes supplemented by Experiential Electives, Social-Emotional Blocks, Physical Education, and DEALL (Drew Education for Active Lifelong Learning) experiences, culminating in a capstone Senior Project.

English

Graduation requirement Four years

Reading, writing, and discussion encourage self-exploration and develop empathy. In four years of English, you'll be challenged to expand your worldview by appreciating voices from different literary traditions and to reflect on and communicate your own experiences and opinions. Teachers work with you to hone your critical thinking skills and intellectual faculties so that you can understand and appreciate any given text, communicate clearly and confidently, and produce original work that expresses your individual voice.

English 1: Exploring the Self Through Literature

Who am I and what is important to me? In what ways do the experiences of characters in literature match or challenge my own worldviews? What happens when we meet others with opposing values?

These questions drive our English 1 course, where our readings, discussions, and writing help you understand others and yourself. You will be challenged to use our texts as tools for reflection, demonstrating the lifelong role that literature can play in gaining empathy for others and developing your own personal philosophy. Our classes are community-focused, where you use class discussions and group work to deepen your understanding of our texts and develop your literary analysis skills. In a time when conversations can be fractious and divisive, we ask you to practice listening, seek understanding and respond thoughtfully.

Daily informal writing strengthens writing fluency, and our formal writing assignments focus on narrative writing and establish the core skills for analytical writing. You will learn that writing is a process and begin to develop your own, creating a foundation that enables you to confidently and flexibly approach future communication needs.

English 2: Purpose and Voice

Why do we write? How do form and language impact meaning? How do I communicate my ideas effectively, powerfully, and confidently? How do audience and purpose impact our communication choices?

This course centers on the art of expression--examining the choices writers make to communicate their ideas and applying them to our own communication needs. You will experiment with multiple forms of communication, with an emphasis on analytical writing and argumentation. You will continue to develop and adapt your own writing process and reflect on your growth as a writer. At this stage, you will gain increasing independence in all of your work and engage in abundant peer collaboration, affirming that working with others helps to synthesize and deepen ideas. This class helps you to further develop your voice and acquire the tools to use it most effectively.

English 3 & 4: Seminars - Beyond The Text

As juniors and seniors, you will engage in college-style seminars designed by faculty based on their expertise and student interest. Seminars address specific themes, regions, time periods, genres, and authorial circumstances. All seminars are unified by the following overarching essential questions: How do texts speak to each other? What connections can be made to film, art, music, journalism, and emerging art forms? How does a piece of literature connect to and enrich my understanding of past and current world events? How do I apply historical and cultural contexts to fully understand a text? How do I assume ownership of my unique perspective and employ my writing tools for original expression?

These questions drive the high-level intellectual content and critical thinking at the core of our seminars. You will engage with difficult and stylistically unconventional literature that will require practice in close reading and recognizing the role of nuance and bias. This experience helps you develop into critical and confident readers, ready to enjoy and derive meaning from any text that you encounter. Your explorations will extend beyond the text as you independently and collaboratively make connections to other texts, to historical and contemporary world events, and within the literary world. You will continue to practice adapting form and language to accomplish your communication goals, while working to develop your unique perspective and writing voice.

2023-2024 Seminar Offerings (each has an Honors and a Non-Honors option):

Honors courses have the same seminar options and develop similar academic skills. They are differentiated by their increased depth and accelerated pace, involving additional reading, writing, and research components. Honors courses are designed for students who have demonstrated a mastery of grade-level literary analysis and writing skills and are eager to perform more complex, self-driven assignments. Ideal candidates embody authentic engagement during all-class and small-group activities and are independent learners who demonstrate original thinking, take intellectual and creative risks, and make insightful connections to other texts and our world.

Prerequisites for Honors: Writing sample, a brief statement of interest, teacher recommendation, and an A in the current English class.

Adaptations

Why is it that some stories are able to stand the test of time? Why do we continue to tell the same stories over and over again? This course will explore classic tales and their contemporary reimaginings—literary and film—to better understand how the relationships and messages within are transformed by the audiences that read them. What is it about these stories in particular, and how are they able to stay relevant? We will examine how adaptations have the power to preserve the original while creating something that better reflects the diversity of the human experience.

Moments of Disaster

Earthquake. Plague. Flood. Fire. We are living through an era of constant disaster. Through this course, we'll encounter moments of hardship created by the human and natural worlds. These catastrophes are moments of severe distress, deprivation – and also possibility. Together, we'll ask what these moments of disaster reveal about individuals and about the societies we've created, considering social norms and power relations are reorganized and reproduced through disasters, often in unequal ways. Ultimately, we will use the tools of literature to imagine how these moments of disaster can build our capacity for resilience.

The Art of Storytelling

Stories are everywhere--embedded in the novels we read, the movies we watch, and the video games we play. Storytelling has been used across time and space to share how each of us sees and experiences the world, how that world could be drastically different, and how who we are and what we believe is affected by the stories we tell. This course will explore a variety of literary works in order to better understand how writers use language to entertain and enlighten. Students will create original works, both analytical and creative, and take the time to explore how those stories are a part of the world.

Speculative Fiction

What do authors and artists think about when they imagine the future? How do real events inspire the stories they create? You will explore the worlds created by some of the greatest writers in literature, absorbing multiple perspectives on both the past and the future, as well as reflecting on and discussing diverse perspectives on our own evolving world. Through a wide range of authors, texts and essential questions, you will discover and develop stories that inspire passion and creativity, with multiple modes of expressing your ideas and visions.

Social Studies

Graduation requirement Three years (World History, US History, Seminar)

We live in an increasingly complex world that demands nuanced thinking. Every day in social studies at Drew, you will develop your intellectual curiosity and a confident voice to share your discoveries. You will learn the skills and knowledge for historical inquiries, and approach your investigations with compassion and empathy for those involved in events, movements, and ideas. Specifically, you will acquire processes for recording observations, analyzing and interpreting data, forming arguments and publishing your results to an audience. By working on your critical reasoning skills, you will feel confident to act according to your knowledge and principles in the contemporary world.

World History

This course will serve as your introduction to history classes at Drew as we delve into global history, focusing on the modern era. To narrow this extremely broad course of study, we will build understanding thematically by examining the foundations of societies, power, economic systems, expansion, turning points, and conflict.

Discussions, projects, analysis of primary and secondary sources, historical writing, and the development of critical thinking skills will guide our exploration of these themes. We will continually reflect on how what we learn is relevant to our lives today, emphasizing the many ways people and their choices throughout history shaped our contemporary world.

The Climate Academy: Integrated Environmental Studies

The Climate Academy is an interdisciplinary opportunity for 9th graders that links their World History and Biology courses through the study of the environment, climate change, and climate action. While both courses mirror the key content and skills of other World History and Biology courses, the focus on the planet allows for deep understanding through relevant application. While engaging in intellectual discovery in these two courses, students demonstrate their understanding through interdisciplinary service and action projects. Some of the questions students investigate:

- How have living organisms adapted or changed over time?
- How have humans' actions changed the earth and life on earth?
- How can we use our knowledge to protect life on earth?

Prerequisite: Student application

U.S. History

From our study of the very first Americans and the geography of the land they inhabited through the forced importation of enslaved Africans to the emerging European colonies, concepts of identity serve as the focus of this course. The rebellious events that lead to the founding of the nation and the documents that created it are explored through the lens of those earlier actions. The dividing issue in the US Constitution threads through the Abolition Movement and the Civil War. The policies of Reconstruction permeate the 20th century and relate to the racial conflicts we are dealing with today. To investigate these events and ideas, we will analyze a variety of primary and secondary sources--letters, cartoons, journals, scholarly articles--and refine critical thinking skills and intellectual voice.

We will also complete a variety of research projects that incorporate student choice and independent work as well as many forms of presentation and the production of final learning outcomes.

U.S. History Honors

Honors classes explore similar topics as non-honors courses but at an accelerated pace with additional depth, resources, and assessments. Department recommendation is based on independent, self-regulated learning and a genuine interest in the skills and knowledge of history and social studies. Students are expected to perform more complex, self-driven assignments, relying on self-initiated one-on-one tutorial consultations.

Prerequisite: Department approval.

History Seminars - Yearlong Courses

History of the United States Since 1945: Honors

1945 was a pivotal moment in United States history. To examine the postwar period and its reverberations, students will explore contests over definitions of American freedom, national identity, and the expansion of rights and access to power while paying particular attention to issues of race and racial oppression, gender and sexism, identity, class, and culture. This course digs deep, unearths untold stories, provides valuable historical context for the contemporary U.S., and asks students to question and find their voices in the stories we tell about the past.

This course will serve as preparation for college-level history courses. To this end, it will be centered on discussion and collaboration to aid in the development of historical thinking, analysis, and writing. Students will debate, hone presentation skills, assess historiography, engage in independent research, write book reviews, and go through the process of oral history-making from interview to publication.

Prerequisite for Honors: Department approval.

20th Century World History: Honors

Starting with World War I, we will look at the development of the modern world with particular attention paid to understanding the historical origins of contemporary issues and conflicts. We will examine the decline of the European colonial world, and the challenges posed to the old regime by colonial subjects, women, and racial and ethnic minorities; the influence of communist and socialist ideologies and increasing globalization; and the social, economic, and political changes resulting from the rapid development of technology.

Prerequisite for Honors: Department approval.

Economics

We will hone in on the major themes of economics, personal finance and government. After an introduction to microeconomics and macroeconomics, we will examine broader issues such as income inequality, taxes, and how businesses operate, as well as more specific ones like the 2008 financial crash. In addition, we will look at how individuals can effectively navigate our current economic system by investigating topics including personal debt and investing. Ultimately, we will use a similar investigation of governmental systems to determine how those processes affect--or don't affect--the economic status of the nation. In addition, we will survey recent U.S. history (1945-present), using an economic lens to focus on how the events of this period have shaped our contemporary lives.

Introduction to Law

From local government, to business transactions, to enforcing morality and safety, law is everywhere in our society. This class is designed to provide students with a primer on the basics of law and governance in America. Students can expect to do a lot of on the spot thinking, problem solving, and debate as they investigate what the law is, and consider what they think the law ought to be. We will start with philosophical concepts underpinning legal systems like utilitarianism and natural law. We will then wade into the basics around contracts, property, and tort law to ensure students can be the most well-advised consumers in the marketplace. We will examine the law around the foundations of families, such as marriage, paternity, and child custody, and the law's role in the dissolution of these relationships. We will also take up sexual orientation rights as a bridge into Constitutional law. The big ideas of American history and culture underpinning the US Constitution, including enumerated and unenumerated fundamental rights, such as speech, press, religion, labor, and privacy are explored in depth. We will study crimes that citizens may be held accountable for, and criminal procedural rights when navigating encounters with law enforcement. Time permitting, we will learn about the basics of certain high stakes business law that permeates the Bay Area economy, e.g., intellectual property and antitrust regulation, and also role play a full mock trial to see the law in action.

History Seminars - Semester Courses

Bay Area and California History

This class is a chance for students to engage deeply with local history. We will examine the history of the Bay Area and California from the first indigenous people to the present, including Native American cultures before colonization, Spanish California, the Gold Rush and American conquest, the state's role in World Wars I and II, and California's history of both rejecting and welcoming immigrants. We will also study how civil rights movements, labor unions, radical organizations, grassroots activism, and anti-war campaigns have shaped the political and social life of the Bay Area. In addition to history, this course will explore local politics and the structure and function of city, county, and state governments.

Russian History

The war between Russia and Ukraine has been the central geo-political event since the start of 2022 and this course will examine the history of the region, starting with the Slavs and Vikings' emergence in Eastern Europe in the first millennium A.D. and carrying through to Russia's significant 1917 Revolution and integral role in the defeat of Nazism in WWII. We will cover Kievan Rus and its central place in Christendom before Russians developed Moscow. Russian conflict with the Mongols and Russia's legacy as both a European and Asian country—the USSR would encompass more than one hundred varied ethnicities—will be explored. We will study the ruthless reign of Ivan the Terrible, and explore patterns of autocratic rule in the region. We will also look at the modernization of Russia through the leadership of Peter the Great and Catherine the Great. Finally, we will work with Russia's impressive cultural achievements, including the literary significance of Tolstoy, Dostoevsky, and Chekhov, and cinematic achievements of Eisenstein and Tarkovsky.

Global Current Events in Historical Context

Using our historical knowledge as a foundation for understanding the present, we will investigate, analyze, discuss, and debate global current events. Topics will be driven by student interest and will include political, social, economic, and environmental issues, examining their historical roots and ongoing effects. In addition to learning about current, breaking news, we will explore historical events from the last few decades. Primary and secondary source materials will guide our study. We will practice our skills of identifying bias and perspective and evaluating reliability. Potential topics include elections, wars, summits, trade deals, economic trends, and social movements.

History of Science and Technology

Neil de Grasse Tyson argues that the “universe is under no obligation to make sense to [us]” but since time immemorial humans have sought to unravel its mysteries. This course will trace how people from different parts of the world, across time and space, have come to understand the natural world through developments in science and technology. Along the way, students will investigate the fascinating ways religion, art, politics, and ethics have informed and transformed these endeavors. Students can expect to explore this history through source analysis, debate, projects, field trips, and historical research and writing.

The Islamic World 500-1700 CE

In this course students will examine the development and rise of Islam as a world religion and civilization. It will focus on the Middle East, North Africa, and Central Asia, with topics including the Islamic Golden Age and the development of regional empires as well as conflicts between outside empires and the Muslim World, including the Crusades, the Mongols and the history of the Ottoman Turks. Ultimately, students will gain an understanding of the reasons for Islam’s rise and the varied forms in which religion interacted with the politics, society and economies of the region.

Latin American Studies

This course will look critically at what constitutes the identity of Latin America. We will question how economics and nations outside of Latin America shaped Latin American politics. And we will also consider what Latin American aesthetic artists have created to express Latin American identity and politics. Students can expect to cover indigenous people, their initial encounters with Europeans, and also the arrival of enslaved laborers from Africa. The value systems, motivations, and achievements of indigenous civilizations will be central to the course. European hegemonic exploitation of the indigenous and also transcultural convergence, e.g., the mestizo as an identity, will be explored. We will also study political acts, such as revolution, independence movements, and war, that reshaped the Latin American map in the 19th century and systems and practices such as Nationalism, guerilla warfare, and Latin American labor migration to the United States. Finally, we will look at how Latin American artists, e.g. Pablo Neruda, Gabriela Mistral, Gabriel García Márquez, harnessed indigenous, mestizo, and transcultural identity to create a Latin American aesthetic.

Mathematics

Graduation requirement Three years including Math 2

Developing mathematical literacy is an explorative, dynamic and creative process essential to making informed decisions in an ever-changing world. You will work collaboratively as you focus on developing mathematical reasoning in order to become a critical thinker and an adaptable problem solver. Our foundational courses focus on algebra, geometry, trigonometry, and data analysis.

By applying your mathematical knowledge and strategies to real life situations, you will be prepared to meet the demands of college and the challenges that lie beyond.

Incoming students' transcripts and placement exams will be taken into consideration as we aim to place each student in their best-suited class to set them up for success.

Math 1: An Intro to the Language of Mathematics

How does the language of mathematics aid us in our problem-solving? You will develop a foundation in the language of mathematics and learn expedient algebraic pathways to solving real-world problems involving linear and exponential growth. Unlock the mystery of this language by translating words into symbols and problems into "puzzles" that are solved with the laws of mathematics. Your teacher will guide you and your group through instructional activities that gradually reveal "clues" to unraveling the algebraic query of the day. You will strategize together by approaching the problem from the different vantage points that each student brings to the work.

Experience the satisfaction of a "team" tackling a challenge and succeeding, as well as the confidence built by independently solving problems through your own hard work and perseverance. You will see how systems of linear equations can be used in the debate about minimum wage, explore foundational concepts of functions with the decoding of encrypted messages, and examine human population growth and its impact on the environment with exponential functions. Algebra, or "al-jabr", means the "reunion of broken parts". This is exactly what we will do together in Math 1 by using the laws of mathematics to unite seemingly disjointed quantities in our constant quest to understand the universe.

Math 2: Studying Spatial Relations Through Mathematical Reasoning

How does geometry draw the soul towards truth? Why did Abraham Lincoln in preparation for a career in law study one of the oldest textbooks in existence, *The Elements*, written in 300 B.C. by Euclid, the father of geometry? In your Math 2 class, you will discover the answers to these questions, among many others. When studying geometry, you will not only examine the spatial relations that dictate the laws of the universe, you will also develop the deductive reasoning skill necessary to prove that a conjecture is indisputably true, a skill that one can transfer to any discipline, as Lincoln demonstrated.

Working collaboratively with your peers, you will be guided through investigations that unveil structures and relationships among figures in two dimensional and three-dimensional space. You will strategize together by approaching the problem from the varying vantage points that each individual brings to their work. What begins as an inquiry into an elementary concept--such as the sum of angles in a triangle equaling 180 degrees evolves into a discussion of curved space and Einstein's Theory of Relativity.

Learn how early geometers measured the height of a pyramid and the distance to the moon. Experience the present-day utility of right triangle trigonometry in the building of ADA access ramps or in the designing of environmentally safe urban centers of the future. Join us in our Math 2 course and witness the magic of geometry in real-life application while always reaching into our algebraic toolkit to aid us in our problem-solving.

Math 3: Building Fluency in the Language of Mathematics

In Math 3, armed with a strong foundation in geometry, you will further your understanding of algebraic laws in the context of several settings and with access to more mathematical tools. You will join your fellow students in the investigation and comparison of models of growth, from linear to polynomial to exponential and to logarithmic. Indirect variation and rational functions play a large part as we delve into the effective population of the Southern Elephant Seal.

Whether you are collaborating on a carbon-dating project to determine the age of fossil remains or studying the growth of a pandemic, you will view problems from the varying vantage points of different individuals and be an active member of a team working towards a single goal. Independent work will allow you to exercise the resilience and perseverance developed in your earlier years of mathematical study. You will revisit trigonometry, but not as a set of ratios in a right triangle, but as a function that models the periodic nature of much in the world around us. Math 3 will provide the tools needed to investigate further and in much greater depth the functions that you will see in pre-calculus as preparation for the study of Calculus.

Math 3/Precalculus: Navigating the Complex World of Functions

Students come to Drew in various stages of mathematical maturity and they may accelerate at any time in their progressive development of concepts, skills, knowledge and understanding in solving mathematical problems. As a result, Drew offers a condensed, one-year course that covers the material in the two years of the Math 3 and Precalculus courses. This course keeps up a very rapid pace throughout the year and is designed for those students entering Drew in Math 1 and who demonstrate a fine mathematical understanding of abstract concepts throughout their first two years at Drew.

Moving quickly through material and in greater depth, you will challenge yourself and further cement your love of mathematics. Investigate functions that describe our world, from modeling the geography of land with polynomials to comparing the exponential growth of viruses to examining the periodic nature of coastal tides with trigonometry. All the while, you will simultaneously master advanced algebraic techniques for challenging problem-solving. The course prepares students for the study of calculus in their fourth year at Drew and is designed for those students who are interested in further study in mathematics and the physical sciences. The Math 3/Precalculus student possesses algebraic fluency and the ability to digest abstract concepts quickly and thoroughly. This student is an independent, self-regulated and resilient student who has previously demonstrated excellence in the learning of mathematics.

Prerequisite: An "A" average in Math 1 and Math 2, and teacher recommendation.

Explorations in Data Science

From the medical world to the world of scientific research, from satellites orbiting the globe to social network sites like Facebook or Instagram, from polling centers to United Nations commissions, data is being collected everywhere and all the time. An Introduction to Data Science teaches you to think critically about and with data. This course is a dynamic computation-based statistics and probability course that better prepares you for college and the job force.

By developing quantitative critical thinking skills, you will become a more informed participant in our modern democracy. You will engage with real data by learning the statistical, computational and graphical tools for reasoning about the world. By examining data from various sources, you will collaborate with your peers in creating hypotheses and fitting mathematical models to data.

Together, you will work with algorithms to evaluate how well these models mirror reality while learning to program with data through Python, an object-oriented programming language used in statistics. Join your peers in an inquiry-based course while engaging in a very diverse collection of relevant and authentic activities.

Prerequisites: Math 1 and Math 2 (This course can be taken after Math 1 and Math 2 and in place of Math 3 or as an elective in addition to your other classes.)

Precalculus: Modeling the World with Function

When Rene Descartes, a 17th century French mathematician, scientist, and philosopher, devised the first link between Geometry and Algebra, he revolutionized mathematics by paving the path to Calculus. In Pre-Calculus, you will follow Descartes' lead and delve deeper into the study of functions, the relations that make the mathematical world "go round". We can describe functions in four ways, but it is the graphical representation of these relations that allows us to investigate more effectively their behaviors as well as their transformations.

After having acquired the algebraic skills necessary to manipulate mathematical symbols in Math 3, you will investigate the interplay between curves on a coordinate plane and the algebraic symbols that represent them. You will join your peers working together to explore the use of functions in modeling real-world situations in your quest to view the world through a mathematical lens. See a sinusoidal function demonstrating the movement of our oceans or an exponential function revealing the harrowing nature of radioactive decay as well as the rapid growth of a pandemic.

You will understand how mathematics is an instrument in the sciences as you work collaboratively in the completion of a team task. Celebrate your team's joint success in problem-solving, as well as bask in the satisfaction of working independently with solid perseverance and resilience. You will do all this in your preparation for the study of one of mathematics' most beautiful accomplishments - Calculus.

Prerequisite: Math 3

Applications in Discrete Mathematics

How can students recognize the power of mathematics as a tool for changing the world? In this course, math is not a set of "rules" to be memorized in order to find answers to problems without connections to their lives. The purpose of the course is to give a survey of mathematical analysis techniques used to shed light on social issues confronting our present day society and to provide insight when seeking solutions to social injustice.

You will work collaboratively to understand how true mortality rates from Hurricane Maria were estimated when only sixty-four were reported. How does an understanding of mathematics provide insight into the CDC's precautionary constraints in the time of COVID? Incarceration rates among diverse segments of the population become more than just mere numbers. In this course you will gain understanding into how these rates are computed and what the implications have on our society.

This course is for students who desire to use their math literacy to further broaden their vision of the world and, in turn, provide steps along the pathway to solving the problems of social injustice.

Prerequisites: Math 3 or Introduction to Data Analysis.

Applied Calculus: Investigations & Applications

How does the beauty of this dynamic branch of mathematics resonate in the world around us? How does it help us to make sense of motion and change, as witnessed in the orbits of planets, the behavior of fluids, or the profit analysis of goods? This is an introductory course for those students interested in studying science or mathematics. It provides a glimpse into the elegance and utility of calculus without the rigor of an advanced mathematics course.

You will discover the foundational concepts of the mathematical study of change by working collaboratively with your peers to unveil the mystery of calculus. The emphasis on this course is in the "doing" of mathematics in the sense that it will be through activity and investigation that you become acquainted with these concepts. Moving from the conceptual to the concrete, you will work collaboratively to begin to use the tools of calculus to help model real-life problems from population growth to climate change to poverty and beyond.

Prerequisites: Pre-calculus

Statistics Honors: Modeling for Prediction

How can we make informed inferences and accurate predictions using the tools of mathematics? Knowledge of statistics provides you with the necessary tools and conceptual foundations in quantitative reasoning to extract information intelligently from an abundance of data. In collaboration with your peers, you will investigate ways to depict data in an accessible and effective way, one which provides a clear mathematical snapshot of events. Learn the laws of chance as you delve into a study of probability, work on teams in your exploration of various statistical techniques of sampling and experimentation. Together you will enter the world of inferential statistics and begin to use statistical tools to make inferences with a heightened level of accuracy. You will measure the “significance” of various hypotheses regarding health, economics, politics, and sports, thereby paving the pathway to statistical prediction. Enjoy the collaboration of a team working together towards the solution to a messy problem, as well as the satisfaction of working independently, practicing perseverance and resilience in your quest for an elegant solution.

This course is designed for students who enjoy the challenge of a rigorous math course that is steeped in application and provides insight into the complexity of data analysis. Since the course is the application of statistical methods in the real world, the ideal student is proficient at comprehending word problems and possesses strong algebraic fluency. They are independent and resourceful critical thinkers who have demonstrated excellence in the study of mathematics.

Prerequisites: An “A-” in Math 3 or Introduction to Data Analysis and teacher recommendation.

Calculus Honors: The Study of Change

How can the study of change lead to advancements in our understanding of the natural and physical world? You will answer this by delving deep into differential calculus as well as studying net change, area, and volume with integral calculus. The notion of a limit in a most fundamental sense forms the foundation of calculus.

You will experience this mathematical mystery as it unveils the secrets of the infinitesimally small rate of change at a precise moment in time. Throughout this course, you will witness the historical movement from the static world of geometry to the dynamic world of calculus, which hallmarked The Age of Enlightenment.

Through both collaborative initiatives and independent study, you will investigate the spread of an Atlantic oil spill as its size increases over time, the amount of medication remaining in the bloodstream at an instant, or the exact moment when profit is at its maximum. All this is “the calculus”-and much more-as we continue our task of modeling the world with mathematics.

This course provides a rigorous, in-depth study of calculus on an honors level and is designed for students who are interested in studying mathematics in college as either a major or prerequisite for further studies in the sciences. The ideal Calculus Honors student has a passion for mathematics, a curiosity about the unknown and seeks out a rewarding challenge in math class. This student possesses keen mathematical insight, seeing patterns and making connections on an abstract level. The highly conceptual comes natural to the calculus student as does a fluency in algebraic skills. They are self-motivated, independent and resilient learners.

Prerequisite: an “A” average in Precalculus or Math 3/ Precalculus and recommendation of the department.

Programming 1: Introduction to Programming

The course will introduce you to the fundamental concepts of programming and Computer Science. You will explore how computing and technology impact the world.

The course will delve deeply into problem-solving building on your computational and abstraction skills. Topics include data types, control flow, functions, and algorithms. You will engage in group lessons to get introduced to new concepts and then work independently in small groups by completing programming challenges in class. The goal of the class is to master the basics of programming along with gaining understanding of how computers work.

Programming 2

Once you have mastered the concepts introduced in Programming 1, you will engage in larger projects with a full software development cycle - design, test, and iterate. Larger projects require greater planning, so you will also be introduced to software engineering concepts that will guide your development process. Focusing on project-based learning, the course will be broken down into several programming projects. Projects will range from video games to data visualization to mobile.

You will engage in group lessons to introduce new concepts and work on short practice exercises in small groups. Topics include data structures, object-oriented programming, multi-dimensional arrays, libraries, and advanced algorithms. The course's emphasis will be on independent projects that are to be completed in and outside of class. The goal for the course is to advance your programming skills and knowledge by building meaningful and relevant projects.

Prerequisites: Programming 1 or department approval. (Students must have a basic understanding of Object-Oriented Programming)

Science

Graduation requirement 3 years including the sequence of Biology, Chemistry, Physics

The Drew Science Department gives students the skills and knowledge about how to use scientific principles in order to understand, explore, and work on solving problems in the physical and natural world. Students learn how to use scientific reasoning in order to collaboratively pursue evolving knowledge of the world through a multitude of hands-on experiential learning, community integration, and self-driven projects. By the end of their three-year science progression, students will have the proficiency across multiple scientific disciplines to become a lifelong learner of science within a variety of different contexts.

Biology

In your first year-long course dedicated to one of the natural sciences, you will explore what makes life unique in the universe. You will examine life from the microscopic scale of biomolecules and cells to the macroscopic realm of ecosystems and biomes. You will address questions about the composition of life, the transfer of energy, continuity through cell division, the molecular basis and the inheritance of genetic information, the dynamic interactions in communities and ecosystems, and the evolutionary mechanisms that underlie the diversity of the living world.

You will explore through experimental design, research projects, hands-on simulations and role-playing, and wet labs. Examples of wet labs are DNA extraction, enzyme activity, and exercise and cellular respiration. Throughout the units, you will learn and practice scientific skills and proper lab techniques such as making observations, measurements, collecting and organizing qualitative and quantitative data, and drawing conclusions based on evidence.

The Climate Academy: Integrated Environmental Studies

The Climate Academy is an interdisciplinary opportunity for 9th graders that links their World History and Biology courses through the study of the environment, climate change, and climate action. While both courses mirror the key content and skills of other World History and Biology courses, the focus on the planet allows for deep understanding through relevant application. While engaging in intellectual discovery in these two courses, students demonstrate their understanding through interdisciplinary service and action projects. Some of the questions students investigate:

- How have living organisms adapted or changed over time?
- How have humans' actions changed the earth and life on earth?
- How can we use our knowledge to protect life on earth?

Prerequisite: Student application

Chemistry

Chemistry is the study of the structure and composition of matter that makes up living things and their environment. Chemistry also deals with the study of the changes of matter and the mechanisms by which changes occur. You will explore the fundamentals of chemistry including measurement, laboratory safety, properties of matter, gas laws, the structure of the atom, electron configuration, periodic table patterns, bonding, chemical reactions, and stoichiometry.

For example, you will explore how electron configurations impact the color of fireworks and use patterns in flame tests to determine the identity of a mystery substance. This course aims to give you a deeper understanding of the scientific processes that go on around us and the interconnections among the sciences, technology, society, and the environment.

Chemistry Honors

Honors classes explore similar topics as the corresponding course but at an accelerated pace with additional depth. You will be expected to perform more complex, self-driven assignments in addition to increased reading, writing, and research components. The goal of this course is to lead you towards a greater understanding of the chemical world around you through inquiry, analysis, experimentation, and mathematical manipulations. An emphasis will be placed on hands-on learning, use of technology, and application to real-world situations.

Prerequisite: Department approval, based on previous science and math performance.

Physics

Physics lays down the foundational laws of the universe that all objects obey. In this highly interactive, lab-centric course, you will arrive at these fundamental laws through experimentation and observation. Examples of activities include observing the behavior of a hovering disc to arrive at Newton's First Law or using force sensors and digital graphing technology to figure out how much friction exists between your shoe and the classroom floor. Topics covered include motion, forces, Newton's Laws, and energy.

In addition to these topics, there is supplementary emphasis placed upon developing scientific practices such as sound experimental design, independently analyzing experimental data, formulating evidence-based conclusions, and communicating those conclusions to specific audiences. Physics is the final course in Drew's three-year graduation requirement and perfectly complements Biology and Chemistry to give you an overview of different scientific disciplines.

Physics Honors

Honors classes explore similar topics as the corresponding course but at an accelerated pace with additional depth. You will be expected to perform more complex, self-driven assignments in addition to increased reading, writing, and research components. Students will be expected to have a higher level of math proficiency, especially in trigonometry. Furthermore, students in honors are expected to apply prior knowledge to new and novel situations with minimal scaffolding in order to formulate their own conclusions.

Prerequisite: Department approval, based on previous science and math performance.

Human Anatomy & Physiology

Discover the complexity of the human body through the study of its interconnected organ systems and the application of the content to patient simulations. We will use real patient cases to practice problem-solving and critical thinking while drawing on your past experiences with sports, wellness, injury, and illness as well as current research to better understand how the body develops and heals. Whether you are interested in a career in health care or are just curious about how your own body works, come learn more about this beautiful, breathing, bleeding, biological machine you live in! (Course includes basic training in first aid and CPR.)

Prerequisite: Chemistry

Marine Science: Physical Oceanography and Marine Biology

Examine marine sciences through topics including physical oceanography, planktonic life, and a survey of invertebrate and vertebrate life in oceans, including sea turtles, marine mammals, and seabirds. Special emphasis will be placed on marine conservation and environmental justice. You will learn why we need to protect our marine resources for the benefit of humankind. The first semester is focused on physical oceanography, where we investigate navigation, waves and tides, and beach formation. The second semester is devoted to life in the ocean and protecting all marine species. The course is experiential in nature. Therefore, field trips (sailing on the Bay, beach visits, tide pools, estuary visits) and project-based learning are key features of the course. You will apply your knowledge to real world situations in marine environments.

Prerequisite: Biology

Zoology

Apply basic concepts learned in Biology to gain a deeper understanding and appreciation of animal diversity. You will identify structural and functional themes defined by a common evolutionary heritage. You will apply data, analytical, and writing skills in group and independent projects that are related to animal function and ecological interactions. You will develop a critical frame of mind and environmental stewardship in examining human impacts on animal populations and communities. You will use microscopy and dissection to explore animal structure, function, and behavior.

The class will include exploration of habitats in museums, aquaria, and tidepools and is designed for you if you wish to dig deeper into animal biology and learn more about the human body as a prototype of animal anatomy and physiology.

Prerequisite: Biology

Advanced Topics in Chemistry Honors

This is an honors level course. A laboratory-intensive course where students broaden and deepen their understanding of chemistry and its role in the modern world by studying the chemistry of water systems, atmospheric chemistry, agricultural chemistry, mineral and mining chemistry, and food chemistry. The emphasis of the course will be on the explanation and prediction of chemical behavior, lab skills, and lab accuracy. You will examine case studies including field trips on the areas of fresh and marine waters, groundwater, wastewater, and geo-chemistry of the Bay Area. This class is designed in the format of lab-based courses in college.

Prerequisite: Chemistry and department approval based on previous science and math performance.

Advanced Topics in Physics Honors

This is an honors level course. You will continue the exploration of the physical world by designing labs to build and test scientific models and by applying mathematics to tackle practical scientific problems. Topics covered include momentum, circular motion, astrophysics, sound and waves, optics, and modern physics.

The class is heavily based on hands-on labs and open-ended projects. For example, you will apply your understanding of lenses and mirrors from the optics topic to fully design and build your own telescope or other optical instrument. This class is ideal for science students interested in exploring college-level problem solving and real-life research questions.

Prerequisite: Physics and department approval based on previous science and math performance.

Introduction to Engineering

Engineers apply scientific knowledge in order to design solutions to complex problems. By engaging in the engineering design process, collaborating with others, and thinking creatively, engineers design the technologies and products that propel society forward. This class offers a survey of the different branches of engineering and offers a glimpse of potential work opportunities. Through a combination of classwork, design projects, and competitions, students will mimic the work and problems encountered in biomedical, civil, mechanical, and other engineering related fields. Each semester, students will be given two or three real world problems to solve through designing and creating a product. Some examples of projects could be designing a bridge for a community, a prosthetic limb for a specific patient, and building a remote operated vehicle to use underwater. This hands-on class is perfect for the creative problem solver, designer, and anyone who is considering a future in engineering.

Prerequisite: Chemistry

World Languages

Graduation requirement Three years of language, at least two of which are consecutive and in the same language.

The ability to communicate in more than one language is an essential life skill. Drew's World Languages department creates authentic language opportunities to send you into the world as a culturally competent global citizen. At Drew, you can study American Sign Language, French, Mandarin, and Spanish.

ASL 1

In ASL 1, you learn the basics of American Sign Language. You will start by learning to sign each letter of the alphabet which allows you to finger spell words. At the same time, you will build your vocabulary by learning signs for a variety of words and expressions, such as those related to family, work, and leisure activities.

At this beginning stage, you will also learn handshapes, classifiers, and non-manual markers. By the end of the year, students will know how to introduce themselves, greet others, express their likes and dislikes, ask questions, and engage in basic conversations. Activities include watching signing videos, reading texts which are enhanced by visual clues, face-to-face interactions, and translating between ASL and English. You will also research a Deaf person of your choice to start to learn more about the Deaf world.

For their final project, students will create a children's book and will have an opportunity to combine much of the language they have learned during year one. English is only used to clarify as most of class time will be spent communicating using ASL.

ASL 2

In ASL 2, you will expand on your signing skills learned in ASL 1 and begin to add detail and nuance to your expressions when communicating needs, conveying detailed information, or comparing and contrasting ideas. This higher level of precision is particularly important when using and understanding signs that express emotions. New vocabulary includes holidays, travel, events, and activities. You will learn about linguistic register and will practice shifting from a formal to a more informal tone, as well as using contextually appropriate signs.

You will also begin to use increasingly sophisticated sentence structures by using coordinating conjunctions. At this level, project work involves songs which offer a valuable opportunity to hone fluency skills and express emotions. This course is conducted in ASL and no spoken language is expected by this level.

ASL 3

In ASL 3, you will continue to expand on your knowledge gained from ASL 1 and 2. You will be expected to demonstrate greater fluency, accuracy, and control of vocabulary, with an emphasis on connecting ideas and creating short compositions that are presented to the class. You will spend more time interacting as a group, as opposed to the partner work which is primarily used in ASL 1 and 2. Deaf culture is explored in depth, as you develop a fuller understanding of the relationship between culture and language. For example, you will explore the daily life and experiences of Deaf people at work and at play.

Culturally appropriate expression is practiced throughout the year. You will complete two major projects in addition to several smaller ones. You will work in groups to create a filmed weather broadcast in the fall and a segment from a cooking show in the spring. At this level, you will also develop basic interpreter skills in order to be able to interpret during assemblies and other school events the following year. This course is conducted entirely in ASL.

ASL 4

In ASL 4, you will continue to expand on your knowledge gained from ASL 1, 2, and 3, developing your receptive and expressive skills at the advanced level. In tandem with using advanced signs, you will continue to deepen your knowledge of Deaf culture. This includes the exploration of other sign-based languages, for example International Sign, as well as life stories of famous Deaf people from around the world.

Emphasis is placed on practicing the language in a wide variety of contexts and engaging in authentic conversations inside and outside of the classroom environment during field trips. You will also have the opportunity to practice ASL interpretation using scenes from a wide range of films, allowing for a thorough review of commonly used language. At this level, you will take turns interpreting for your teacher at school-wide events, providing invaluable real-life interpretation practice. This is an advanced level class during which ASL will be used exclusively.

French 1

During this introductory course, you will develop the ability to recognize and use basic vocabulary to communicate and express your ideas in French. You will work toward mastering the present tense and using it in relation to a variety of themes including family, school life, and personal preferences. You will have the opportunity to research various cultural aspects of daily life in many of the 40+ francophone countries and will carry out an in-depth study of the French-speaking country of your choice.

French is introduced to the classroom on day one, and by the end of the year, instruction is approximately 50% in French. The *Promenades* text provides structure for the course, though a variety of authentic, supplemental materials will be used as well. Lastly, a significant portion of this class will focus on language-learning strategies i.e., learning how to learn a language.

French 2

As a student in French 2, you will continue to develop four skills—listening, speaking, reading, and writing—using a communicative method which emphasizes the ability to use French for authentic purposes. You will work toward mastering the primary past tenses and object pronouns in this lower intermediate class. A deeper understanding of the French-speaking world is promoted through the use of culturally rich, authentic materials and comparisons with your own life and experiences.

As a primary example, you will cook and compare foodways and cultural traditions in France and the United States. You will use a number of resources, including the *Promenades* text as well as authentic texts such as Antoine de Saint Exupéry's novel *The Little Prince*, authentic sources from the Internet, and supplementary materials created by the teacher. For your final project, you will create an independent project and presentation that reflects your learning through the year, drawing inspiration from material and themes explored particularly during the spring semester. The class is taught in both French and English.

French 3

This upper-intermediate course provides an in-depth review of grammar and vocabulary previously studied and introduces advanced language forms such as the past perfect tense and conditional mood. The theme of storytelling is embedded throughout this course during which you will read and discuss a variety of literary texts, as well as write your own stories in a variety of formats (comic books, picture books, blogs, videos).

In addition, speaking skills are developed through a series of storytelling activities and oral presentations. A textbook, *T'es branché 3*, is used for some grammar practice and additional activities. However, the majority of resources used are authentic materials. French is the primary language of instruction and English is used only for clarification purposes.

French 4

French history, starting from the French Revolution, provides the framework for this advanced course which provides extensive opportunities for practice and consolidation of previously learned content and skills. Activities are designed to reinforce the four language skills needed to demonstrate proficiency in a language. Literature, as well as various selections of articles, films, and other authentic materials are used as a tool to enrich vocabulary, deepen comprehension, and develop both written and oral expression.

On a regular basis, you will investigate, share, and reflect upon current events in the French-speaking world and participate in roundtable discussions on a wide variety of topics. Language register is also explored, and you will learn French slang, while contrasting it with its more formal counterparts. This comparison culminates in a video project during which you will create and film two versions of the same scene, one in formal French and the other using a highly colloquial version of the language. This course is taught exclusively in French and students are expected to speak only French in the classroom.

French 5 Honors: Advanced Topics A

This honors level course explores six essential themes: Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics. We use authentic materials—podcasts, newspaper articles, television programs, films, and other materials from various francophone speaking countries—to explore these themes and better understand how they impact life in French-speaking countries, as well as the student's home country. Students in the course are encouraged to sit for the AP French exam, offered at Drew in May.

It is expected that students entering this class will already have developed a strong grammatical base in French and should be able to express themselves orally and in writing with a fair amount of accuracy and fluency. Some grammatical and lexical topics will be addressed in this course, focusing on the difference between formal and informal registers and written academic language versus spoken colloquial language. Students will be prepared for the AP French exam by completing tasks mirroring those seen on the actual test under the same time constraints.

Prerequisites: Department approval is required for honors-level courses. Approval is based on teacher recommendation, previous academic performance in language courses, and an additional placement test.

French 6 Honors: Advanced Topics B

This advanced honors-level course is designed for those students who have successfully completed French 5 or are already proficient in French. You will continue to explore the guiding themes of level 5 while taking on a leadership role in the classroom and acting as mentors for the French 5 students. Course materials include literature, film, newspaper articles, podcasts, and other authentic source materials in the target language. You will be expected to work independently on a variety of papers, projects, and presentations, as well as lead classroom discussions and design, develop, and run a variety of activities for your classmates. This is an excellent leadership opportunity for motivated students who wish to deepen their understanding of global challenges, particularly as they pertain to the French-speaking world.

Prerequisites: Department approval is required for honors-level courses. Approval is based on teacher recommendation, previous academic performance in language courses, and an additional placement test.

Mandarin 1

This is a first-year course for beginning Mandarin students who have not completed one year of formal instruction or who are taking the language for the very first time. In this course, you will work to build a solid foundation from which to continue your Mandarin language learning. The focus of this class is on fundamental elements such as tones, syllable pronunciation, character writing, and basic grammatical structures. This course utilizes a textbook and authentic materials to cover topics like greetings, family, dates and time, etc. These materials, combined with an interactive classroom atmosphere, will help you build confidence and skills while communicating in Mandarin Chinese. Cultural topics covered in this course include (among others) the importance of names in Chinese culture, family structure, and Lunar New Year, all of which are explored through dedicated projects.

Mandarin 2

This is a second-year course for students who have completed one year of Mandarin, or students who demonstrate mastery of the vocabulary, grammar, and foundational elements covered in Mandarin 1. This course aims to strengthen the four skills of reading, writing, listening, and speaking. Making use of both a textbook and authentic, supplementary materials (videos, advertisements, Mandarin-language websites, local signage, etc.), this course focuses on interacting with others in Mandarin through topics such as hobbies, visiting friends, etc. Class sessions are interactive and incorporate a variety of classroom routines designed to provide you many opportunities to build confidence speaking in Mandarin.

Cultural topics covered in this course focus on (but are not limited to) the importance of modesty in Chinese culture as well as etiquette to observe when visiting people's homes, both of which are explored through a student-produced video project. Additionally, you will examine a cultural topic of choice through your annual Lunar New Year Project.

Mandarin 3

This is a third-year course for students who have completed two years of Mandarin, or students who demonstrate knowledge of and ability to use the vocabulary and structures covered in Mandarin 1 and Mandarin 2. In this course, there is continued focus on four skills—reading, writing, listening, and speaking—with an added focus on learning how to type characters and presentational speaking skills. Use of the course textbook and authentic sources will allow you to explore topics such as making appointments, learning Mandarin, and school life.

Cultural topics covered in this course include (among others) a continued look at modesty as well as the concept of losing/saving face, and teacher/student dynamics. Through the annual Lunar New Year project, you will explore a new cultural topic of your choice in preparation for our school-wide event.

Mandarin 4

This is a fourth-year course for students who have completed three years of Mandarin, or students who demonstrate both knowledge of and an ability to use vocabulary and structures covered in the first three levels. This course is designed to further strengthen the four skills of reading, writing, listening, and speaking and uses a combination of textbook and authentic sources to explore what life in a Chinese-speaking country might be like through topics such as transportation and shopping in the target culture. Through project work, you will practice bargaining in a simulated market, explore and build awareness around your identity as a speaker of Mandarin, and research a more nuanced cultural topic during Lunar New Year.

Mandarin 5

This is a fifth-year course for students who have completed four years of Mandarin, or students who demonstrate both knowledge of and an ability to use vocabulary and structures covered in the program's previous four levels. This course is designed to continue developing the four skills of reading, writing, listening, and speaking. Mandarin 5 uses a combination of textbook and authentic sources to grow your understanding of Chinese language and culture and prepare you for life abroad, through topics such as talking about the weather, dining out, visiting a doctor, dating, traveling, etc.

Students in this course will attend class with their peers in Mandarin 4 and project work, including the Lunar New Year project, which will be a collaboration between the two groups.

Prerequisites: Approval is based on teacher recommendation, previous academic performance in language courses, and an additional placement test.

Spanish 1

Spanish 1 marks the beginning of an exciting journey towards learning a new language and participating in a new culture. This course is designed for students new to Spanish but will also serve students with previous experience in Spanish who may need to strengthen their fundamentals. From the first day of class, you will be speaking *en español*, giving mini presentations, learning how to greet people and introduce yourself and your friends. Additionally, this level will give you the fundamental tools to master the present tense and other building blocks of the Spanish language. You will work on a variety of projects to get familiar with Spanish vocabulary and grammar, including creating visual presentations of the Spanish vocabulary terms and taking turns acting as the teacher to articulate your understanding of how the Spanish language works.

You will also begin to discover the fascinating link between language and culture, especially through music, movies, historical events, food, and more. Lastly, a significant portion of this class will focus on language-learning strategies, i.e., learning how to learn a language. This course is taught in both Spanish and English.

Spanish 2

Students in Spanish 2 continue to develop the four skills—listening, speaking, reading, and writing—with a focus on both conversational and academic language. Through daily work, class conversations, journaling, and more formal written work and projects, you will acquire a diverse vocabulary encompassing culinary traditions, festivities, shopping, and the daily routine. You will use a number of resources, including the *Panorama* on-line textbook, sources from the Internet, and supplementary materials written by the teachers.

This course taps into many different assessments so that students have a variety of modes to demonstrate their understanding. Every chapter includes at least one project as well as oral and written assessments. The course is taught in both Spanish and English.

Spanish 3

Spanish 3 is an intermediate Spanish course that is an extension of the skills covered in Spanish 1 and 2. Designed to build each student's foundation in Spanish through the incorporation of new vocabulary and grammar, this course also aims to deepen your cultural and historical knowledge about the Spanish-speaking world. The four skills of reading, writing, listening, and speaking are developed in this course, with a special emphasis on fluency-building activities. Through projects, you will be asked to demonstrate your understanding of new knowledge (the subjunctive mood, for example).

The examination of specific issues and events relevant to the Spanish-speaking world will not only provide a foundation in the history and culture of Latin America and Spain, but will also serve as a framework for the practice and integration of this level's grammatical concepts and vocabulary. You will use many resources, including an online textbook, authentic sources from the Internet, and materials written by the teacher. The course is conducted predominantly in Spanish.

Spanish 3 Honors

Spanish 3 Honors is designed for students who are looking to take on the challenge of an honors-level language course with greater rigor in terms of the pace of the class and expectations for student accuracy and workload. This course develops fluency in all skills (listening, reading, writing, speaking) through more oral presentations, higher-level readings, and more advanced writing than the regular section. The class is taught in Spanish, and you will be expected to make every effort to interact exclusively in Spanish in the classroom. In terms of grammar, the focus will shift towards the imperative and subjunctive moods, as well as the perfect tenses.

The scope of Spanish and Latin American culture is broadened through short stories, films, myths, songs, and excerpts from local and international media sources. As a final project, you will create a website with written pieces and videos to showcase everything you have learned during the year.

Prerequisites: Department approval is required for honors level courses. Approval is based on teacher recommendation, previous academic performance in language courses, and an additional placement test.

Spanish 4

This course provides a comprehensive review of Spanish grammar and seeks to develop and enhance language skills that are vital for active communication in real-life situations. By developing both cooperative learning and individual skills, you will use real-life, task-based activities to practice the four skills in the target language with authentic Spanish-language materials. The class includes culturally rich authentic materials, mostly literature and film. There are at least two excursions to experience Spanish and Spanish-speaking cultures within the Bay Area. The course is taught entirely in Spanish, and you are expected to communicate with your classmates and with the instructor in Spanish.

Spanish 4 Honors

This is an advanced course designed for students who have demonstrated an ability to synthesize and use a wide variety of language in both written and oral formats. This honors section differs from regular in that it has higher expectations in terms of students' language accuracy and focuses more on exploring literature in Spanish. Each unit consists of lexical development, grammar refinement, and a 20th century fiction or nonfiction narrative in Spanish by a variety of Spanish-speaking authors. Students write essays to practice different language registers at the written level. They lead and participate in informal conversations as well as formal oral presentations to the class. They also watch Spanish-language films and participate in cultural events.

Additionally, students immerse themselves in project-based learning that requires them to engage with the Spanish-speaking world through multimedia components. One example of a group project is the creation of a website for a Spanish-language newspaper, including written, audio, and video articles. Another example is a critical investigation of a real-world problem affecting a Spanish-speaking community. Students will examine the problem in detail and come up with creative solutions to present to the class. The course is taught exclusively in Spanish and students are expected to communicate with classmates and their instructor in Spanish.

Prerequisites: Department approval is required for honors level courses. Approval is based on teacher recommendation, previous academic performance in language courses, and an additional placement test.

Spanish 5 Honors: Advanced Topics A

This honors level course explores six essential themes: Global Challenges, Science and Technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics. We use authentic materials (podcasts, newspaper articles, television programs, films, and other materials from the Americas, Equatorial Guinea, and Spain to explore these themes and better understand how they impact life in Spanish-speaking regions, as well as the student's home country.

It is expected that students entering this class will already have developed a strong grammatical base in Spanish and should be able to express themselves orally and in writing with a fair amount of accuracy and fluency. Some grammatical and lexical topics will be addressed in this course, focusing on the difference between formal and informal registers and written academic language versus spoken colloquial language. Students are encouraged to sit for the AP exam and will be prepared by completing tasks mirroring those seen on the actual AP exam under the same time constraints.

Prerequisites: Department approval is required for honors level courses. Approval is based on teacher recommendation, previous academic performance in language courses, and an additional placement test.

Spanish 6 Honors: Advanced Topics B

This advanced honors-level course is designed for those students who have successfully completed Spanish 5 or are already proficient in Spanish. Through study of a series of short and feature-length films, short stories, poems, plays, and novels, as well as online publications, songs, and podcasts, you will be exposed to a wide variety of rich, authentic cultural material from throughout the Spanish-speaking world while enhancing your reading, listening, and analytical skills.

You will also continue to develop both formal and informal written and spoken registers of Spanish through activities designed specifically to work towards mastery in each of these areas. In addition, you will strengthen your research skills via independent and collaborative projects. You will be expected to work independently on a variety of papers, projects, and presentations. You will also act as mentors to the current Spanish 5 students and enrich the classroom discussions through formal presentations and student-led activities. Course objectives include further stimulating your interest in Spanish and its many representative cultures while preparing you for college-level study in Spanish.

Prerequisites: Department approval is required for honors level courses. Approval is based on teacher recommendation, previous academic performance in language courses, and an additional placement test.

Visual and Performing Arts

Graduation requirement Two years.

The Drew Arts program empowers students to cultivate their personal voice by in-depth exploration in a wide variety of artistic mediums. Learning how aesthetic choices define how a work of art communicates meaning to an audience is at the heart of each creative process. Students rehearse, iterate, reflect, and critique to build the skills required for artistic practice and to explore a sense of self in the world. Between our traditional and digital studios, performance spaces, and an integration of the city as an extended lab, students pursue their own pathways through the program and add their unique perspectives to the community. Their works are celebrated each semester through gallery walks, displays, screenings, concerts, and theatrical productions.

Visual Arts

The Visual Arts Department at Drew invites students to have authentic and engaging experiences in our studio spaces. Through a wide range of traditional and digital approaches, our courses are designed to help you to build skills, express your ideas, and share your point of view through imagery. Our main focus is on individual projects, where each student can examine how aesthetic choices and materials communicate. You will also integrate the city as an extended lab, offering locations for creative work and exposure to museums and artists. Whether you work in drawing, painting, photography, sculpture, film, or other mediums, the visual arts will help you explore ways to interpret the world and develop a personal voice. There are many ways through the program and our course listings below will help you discover your path as an artist.

Drawing & Design 1

What fundamental skills and understandings help prepare you for success in the visual arts? In this class, you will explore how elements such as composition, line, shape, color, texture, value, and space become the building blocks of strong design across the arts. You will work with a range of materials, including pencil, acrylic, and watercolor. Units include drawing subjects from observation, painting, and creating personal design projects to express your own interests and perspectives. Daily focus will be on developing projects, developing studio skills, expanding aesthetic choices, and gathering feedback through critique. Projects culminate in two gallery walk events and school exhibits.

Drawing & Design 2

How are the objects, products, and experiences in our world made? Introduce yourself to the design world and the importance of drawing and imagination in developing ideas for actualization. Learn how designers and artists think and practice observational and interpretive drawing. Units may include fashion design, furniture design, architecture, and figure drawing. You will explore design-thinking issues such as understanding the needs and preferences of the end-user, developing empathy, prototyping, revision, and teamwork. After a variety of teacher-directed projects, you will complete a self-directed project. Projects culminate in two gallery walk events and school exhibits.

Prerequisite: Drawing & Design 1 or teacher approval

Digital Filmmaking 1

How do movies tell a story and connect with viewers? How are films made? Students in this class will learn the camera, editing, and writing skills used by filmmakers to create short movies. Students will work on a number of narrative and experimental projects each semester. Our daily steps will focus on expression through cinematography and editing to build cohesive and atmospheric works. We will also look at samples of historic and international films in order to expand your own toolbox of styles and ideas as you develop your own voice as a filmmaker. Projects culminate in two gallery walk events and community screenings.

Prerequisite: Drawing & Design 1 or teacher approval

Digital Filmmaking 2

How do filmmakers combine cinematography, story structure, and character to create cohesive stories? Students in this class will deepen their writing, camera, and editing skills to build more complex projects. You will create a number of movies each semester in order to explore the aspects of visual poetry, character development, and plot that are essential to cinematic storytelling. Our daily steps will focus on advancing projects through screenwriting, production planning, cinematography, editing, and gathering feedback through critique. We will also look at samples of historic and international works to expand your own toolbox of styles and ideas as you develop your own voice as a filmmaker. Projects culminate in two gallery walk events and community screenings.

Prerequisite: Digital Filmmaking 1

Graphic Design 1

How do images and words combine to communicate? What are the elements of good design and what are the steps in the process? In this course you will explore how artists use graphic design to create messaging. Students will build foundational skills by exploring a range of projects, including logos, branding, infographics, posters, and laser cut products. Work will be done primarily with Adobe Suite and daily steps will focus on developing and advancing projects through the creative process of iteration and critique. We will also engage with professional work, visiting artists, and field trips to gather new ideas and awareness of the field. Projects culminate in a portfolio, two gallery walk events, and school exhibits.

Prerequisite: Drawing & Design 1 or teacher approval

Graphic Design 2

Students in this course will dive deeper into the design process to explore how artists approach projects by addressing communication goals, client needs, systematic analysis, problem solving, iteration, and implementation. Daily tasks focus on developing and advancing projects, including designs for a game board, yearbook, posters, and self-designed work. We will also engage with professional work, visiting artists, and field trips to gather new ideas and awareness of the field. Projects culminate in a portfolio, two gallery walk events, and school exhibits.

Prerequisite: Graphic Design 1

Painting 1

Why has painting endured through human history even as humans have developed so many new digital media? Enjoy the respite and meditative aspects of the painting process as we balance these with creative and critical thinking skills. Painting has an immediacy that can give the artist access to multiple levels of self-expression, from gesture to detailed rendering of chosen subjects. Units are designed to juxtapose basic painting techniques and tips for accurate rendering with more abstract approaches. In an early unit you will render a constructed collage in order to practice color and proportion matching and in a later unit you will rely on your own instincts and mark-making impulses to create works inspired by abstract expressionism. After several teacher-led assignments, you will enjoy the freedom to develop and write about your own subjects and ideas. Critiques and field trips will deepen and broaden your understanding of this wide-ranging medium. Projects culminate in two gallery walk events, and school exhibits.

Prerequisite: Drawing & Design 1 or teacher approval

Painting 2

Build on your foundation in painting while improving your creative and critical thinking skills. You will create a body of related work and learn how to sustain a creative practice through experimenting, developing your ideas, and curating your work with the help of the critique process. As you reflect on how you go about your painting practice, you will find painting can be about self-discovery and finding your voice as an artist. You will write and revise an artist statement, conduct research, explore exhibition venues, and present your work to audiences in and outside the classroom. In the end, you will reflect on both your intentions as a painter and understand how your work is perceived through feedback from peers. Projects culminate in two gallery walk events, and school exhibits.

Prerequisite: Painting 1

Photography 1

How do photographers interpret ideas and emotions through pictures? How do aesthetic choices in camera work and editing influence how images communicate? Students in this class will learn the skills and techniques used by artists to create poetic imagery across a wide range of styles and genres. Foundation assignments will cover the building blocks of composition and design, while a number of personally-designed projects throughout the year will build an understanding of how artists use the creative process of iteration to create cohesive portfolios and books. Our daily steps will focus on advancing projects and gathering feedback. We will also look at samples of historic and international works in order to build your own toolbox of styles and ideas as you develop your own voice as a photographer. Projects culminate in two gallery walk events, a book-publishing project, and school exhibits.

Prerequisite: Drawing & Design 1 or teacher approval

Photography 2

How do photographers build on their foundation and communicate personal vision? How do aesthetic choices in camera work and editing influence how images communicate? Advanced students in this course will expand their visual literacy by exploring a wider range of styles and techniques, such as abstraction, expressionism, design, studio lighting, collage, and multi-frame images. A number of personally-designed projects throughout the year will also continue to build an understanding of how artists use the creative process of iteration to create cohesive portfolios and books. Our daily steps will focus on advancing projects and gathering feedback. We will also look at samples of historic and international works in order to build your own toolbox of skills and ideas as you develop your own voice as a photographer. Projects culminate in two gallery walk events, a book-publishing project, and school exhibits.

Prerequisite: Photography 1

Printmaking 1

How are prints created and why? Prints are images made in multiples and when you make multiples of an image, it frees you to take risks and reiterate. You will explore a variety of media and techniques including linoleum, woodblock, transfers, and screen printing and learn how to pull editions and create a body of work using a press, screens, and handprinting. You will carve; use photographic techniques; paint; print on paper, canvas, and fabric; and experiment with color. Weekly sketchbook assignments will serve as an image bank to create your prints. You will explore and play with mixed media including transfer, collage, and mono-printing. Critiques, visiting artists, and field trips will deepen your understanding and build community. Projects culminate in creating your own portfolio, two gallery walk events, and school exhibits.

Prerequisite: Drawing & Design 1 or teacher approval

Printmaking 2

Build on your printmaking foundations and further your technical skills as you add complexity to your printmaking projects, including mixed media and large scale prints. Experimentation and risk are encouraged as you develop technical mastery and independent problem solving. You will deepen your voice through more independent, artistic investigations around thematic topics including nature, technology, identity, and place. Critiques, visiting artists, and field trips will deepen and broaden understanding. You will develop a body of work through a concentration project of your own design using your preferred printmaking techniques. Projects culminate in two gallery walk events, and school exhibits.

Prerequisite: Printmaking 1

Sculpture 1

How do sculptors work with physical materials to create cohesive pieces? What are the main elements of three-dimensional design? Students in this course will explore a range of projects, including wire, wood, papier mâché, clay stop-motion, installation, and found objects. Daily tasks focus on using the creative process to develop and advance projects. We will also engage with professional work, visiting artists, and field trips to gather new ideas and awareness of the field. Projects culminate in a portfolio, two gallery walk events, and school exhibits.

Prerequisite: Drawing & Design 1 or teacher approval

Sculpture 2

Students in this course will build on their Sculpture 1 foundations to work on advanced projects, explore new ideas, and develop a portfolio of personal work. Daily tasks focus on using the creative process to develop and advance projects. We will also engage with professional work, visiting artists, and field trips to gather new ideas and awareness of the field. Projects culminate in a portfolio, two gallery walk events, and school exhibits.

Prerequisite: Sculpture 1

Advanced Studio Art

How do you make a project your own, find your voice, and show your unique perspective? You will hone these skills through both individual and group critique focusing on both technique and concept development through studio practice and by developing more advanced rendering skills. You will deepen your own point of view through related class and homework assignments to develop a cohesive body of work. Projects include self-portrait as a playing card, zoo poster, mythological hybrid animal, observational drawing of glass and metal, and political posters of social justice issues. You will design a concentration project at the end of the second semester. Critiques, participating in art contests, visiting artists, and field trips will build community and foster investigation. Projects culminate in portfolio presentation, two gallery walk events, school exhibits, and portfolio development.

Prerequisite: Drawing & Design 1 or teacher approval

Portfolio Development

How do artists develop a body of work that expresses their personal ideas and style? How do artists prepare for projects like gallery exhibits, publishing, and applications? In this advanced class, you will go deeper into your chosen medium in order to create a capstone portfolio. Emphasis is placed on using studio skills, experimentation, and aesthetic choices to create more complex visual statements, cohesive vision, concept development, and intentional messaging. Class time will be focused on building your portfolio, honing skills, and gathering feedback through critique. We will also look at samples of historic and international works every week in order to build your own toolbox of ideas. You will also be invited to engage with exhibits, contests, and visiting artists in order to learn more about art in the world. Projects culminate in two gallery walk events, school exhibits, and a completed portfolio.

Prerequisite: Advanced level visual art course and teacher approval

Topics in Art History

Topics in Art History is a course framework for exposure to various art history concerns. Students are introduced to the complexities and vastness of human creativity and analysis. Students study a selection of artists, movements, the art of particular regions and cultures, and how art has been preserved and presented. Critical theory and understandings include several essential questions: How is “art history” created? How does the study of art from our past help us situate cultural understandings? How does the formal analysis of art objects inform us as much as the content? Before choosing an area for research and analysis, students dig into divergent areas within the vast scope of art history, learning how to reflect on and discuss not only the art objects themselves but also their contexts. They write and revise a pitch for their research topics; conduct research using books, websites, galleries, museum collections, and interviews, when possible; and share their work with an authentic audience.

Performing Arts

Drew’s Performing Arts courses are an intentional departure from more traditional pedagogical models of study. Our classes are labs for experimentation and exploration of individual voice and the collaborative process. We aim to foster an inclusive environment in which everyone’s story and identity is valued. We also give students the opportunity to discover the sources, history, and sociocultural context of the popular forms they gravitate to on their own.

Theater and Production courses at Drew are about learning to be seen, heard, understood, and believed. Students develop the confidence to tell their own stories and the empathy to appreciate different perspectives. Course work is focused on building skills in creativity and collaboration as students explore verbal and non-verbal modes of communication. They also engage in self evaluation and reflect on their artistic process through writing and discussion.

Broadcast Media 1

Broadcast Media 1 is a collaborative, hands-on course where students learn and hone broadcast media skills in the context of a full-time class. Video is central to 21st century communication culture, and this is an opportunity to develop student voice and express individual points of view in the farthest-reaching medium, and we use industry standard software (Adobe Premiere and DaVinci) as our main tools for creating our work, in addition to cameras, microphones, and live-streaming equipment that gives a wide variety of possibilities. The various roles students will learn include: writer, producer, director, anchor, cameraperson, audio engineer, editor, live streaming set-up and support, and lighting design, and hair/make-up work. The students' video-based work will generally be short-form pieces in a variety of genres including interviews, think pieces, investigative work, newscasts, documentaries, and humor and a few Drew-specific formats we've been developing. A significant portion of the content will center around the Drew Community, and will seek out interdisciplinary collaborations with classes that meet during the same period, as well as clubs and other groups. Crewing at least one livestream event outside of regular school hours is a requirement of this class.

Broadcast Media 2

In Broadcast Media 2, you will continue to explore and develop your fluency with the skill set you were introduced to in Broadcast Media 1. Leadership and collaboration are encouraged in this second year, as you progress into managing the crew on shoot days and offering your input, guidance, and experience with the collaborative process, our equipment, and our critique and feedback sessions in class. In addition full-class projects, you will be encouraged to delve deeper into the roles you learned in Broadcast Media 1, evolving from the functional skills of Broadcast 1 to stylistic and artistic choices in the context of more complex projects that focus on your interests and the collaborative support of your Broadcast Media classmates. We'll also put time into developing and curating our online presence, in coordination and collaboration with the Communications team. Crewing at least two livestream events outside of regular school hours is a requirement of this class.

Theater Ensemble 1

Theater Ensemble 1 is a hands-on experience in the art of live theater, introducing and exploring theater from page to stage. The focus is on learning to be seen, heard, understood, and believed. You will develop the confidence to tell your own story and the empathy to appreciate different perspectives. Course work includes in-class journaling, analyzing text and character, rehearsing scenes and monologues, playing improv games, and exploring verbal and non-verbal modes of communication while building skills in creativity and collaboration. You will attend live performances in venues on and off the Drew campus, expanding your cultural literacy and acquiring a theater vocabulary. You will gain a comprehensive understanding of the rehearsal process, engaging in self-evaluation through writing and discussion at the end of each unit. This course also examines the roles of various theater artists: actors, directors, technicians, designers, and playwrights.

Theater Ensemble 2/3/4

In Theater Ensemble 2/3/4, you will continue to explore the art of transformational performance and assume increasingly more responsibility for the creative process. This course is designed to expand your awareness of the actor's creative and expressive abilities, specifically in developing fluency with character development, self-awareness, and communication skills. Self-discipline is emphasized, and voice and movement techniques are more exacting, including the introduction of dialect work, masks, and Shakespeare's verse. The rehearsal process underscores the ability to listen with a willingness to change and to practice empathy. Leadership is highlighted as you take on the management of daily vocal and physical warm-ups. You are encouraged to support the growth of the ensemble as you collaborate on a variety of performance pieces—scripted, non-scripted, and original scenes and monologues. There is a continued focus on in-class journaling, discussion, and attending theatrical performances in order to enhance the experience of the ensemble.

Prerequisites: Theater Ensemble 1/2/3 or teacher approval

Theater Ensemble Honors

Theater Ensemble Honors is designed to prepare the serious student for life in the theater beyond high school. Participating in a progression of creative projects, an Honors student is challenged to work as an actor, artistic director, designer, technician, stage manager, and teacher. You are expected to take control of the entire production process as a master collaborator—from research and selection of material to casting, rehearsing, design, and production. You are also asked to explore the ways in which theater can be used to affect social/cultural change or bring a community together through a shared experience.

You must also engage in critical reflection about the process once it is over. As an honors-level student, you will also teach theater etiquette to your peers and lead improvisations, exercises, and class discussions.

Prerequisites: Theater 1, 2, 3 (or equivalents) and teacher approval

Theater Production 1

This is a hands-on course designed to foster understanding and appreciation of the theatrical production process by providing students with a foundation in basic stagecraft. You will be introduced to the skills and equipment needed to take a theatrical event from a conceptual design through mounting a production. Emphasis will be placed on learning about the stage and its equipment, materials, and construction of scenic, prop, and costume elements, lighting, sound, and design. Exploring these design and production elements, you will be provided the opportunity and framework to become well-rounded theater technicians. You will apply and hone your skills by working on the technical aspects of Drew's productions in the performing arts department as you design and construct sets, costumes, and props; hang lights; create special effects; and learn the skills needed for sound design and production. You will also reflect on design elements found in theatrical productions with design analysis and critique. Crewing productions at least once each semester is a requirement of this class.

Theater Production 2/3

Theater Production 2 and 3 are designed specifically for students focused on preparing for higher education and life-long learning in the arts. This course advances and refines the stagecraft techniques introduced in Theater Production 1 as you further your foundation of both soft and hard skills in the practical application of stagecraft for Drew's Performing Arts Department's production needs. You will also assist in supervising new students with overseeing their basic safety skills, critical thinking in design, and troubleshooting issues related to production. At this level, you will actively monitor new students in adhering to the protocols and safety standards on the grid, in the booth, and on the stage. You will also work in leadership roles as crew leads on a service-oriented team that will produce and document performing arts department productions. Additionally, you will be encouraged to specialize in a focus area of your choosing: lighting design, stage management, costume design, sound/special effects design, scenic design, or prop design. Crewing productions at least once each semester is a requirement of this class.

Prerequisite: Theater Production 1 or 2

Music

Music at Drew offers the opportunity to immerse yourself in vocal and instrumental musicianship. Whether you are a beginner interested in trying a new instrument or you are already proficient on one or more instruments, there is a place for you in our student-centered ensemble program that values the contributions of each individual. Drew's Music Ensemble program fosters individual autonomy. Drew students learn from the outset to develop their musical voices through collaboration, authentic practice, and in developing leadership skills.

Instrumental or Vocal Ensemble 1

Arrange and perform advanced literature from a variety of idioms from classical to contemporary. Working in a project-based, collaborative environment, you will practice choosing, arranging, and preparing musical selections for performance and recording in the context of a small ensemble setting. Learn the rituals of rehearsal designed to increase your musical fluency and musicianship/technical ability. Develop your reading skills and deepen your awareness of how scales, chords, and keys articulate the diatonic system which functions across boundaries of musical style and genre. Learn how to improvise an accompaniment or melody applying your knowledge of idiomatically appropriate musical ideas. Experiment, grow, and challenge yourself as you begin to develop your voice in an ensemble.

Instrumental or Vocal Ensemble 2/3

In years two and three, you will continue to develop your technical and musical skills as you begin to take on a leadership role in the ensemble. You will take more responsibility for the trajectory of the group over the course of each iteration of the preparation/performance process, making decisions about arrangements and approaches and the overall sound of the group. You will learn how to transcribe and arrange music to present to the ensemble in lead-sheet or score notation. Dive deeper into the history and context of music that is both new and familiar to you as you continue to widen your perspective and develop your musical voice.

Prerequisite: Instrumental or Vocal Ensemble 1 or 2 or teacher approval

Instrumental or Vocal Ensemble Honors

Students who have demonstrated the desire and commitment to work at a high level in an ensemble are invited to take Honors Ensemble. In this class, you will take even greater responsibility for planning and executing the trajectory of the group over the course of the year. Honors students will be expected to work outside of class on personal assignments to include recordings, transcriptions and research into our repertoire's cultural and social context. You will also be encouraged to take leadership roles in the performances that punctuate our school year, and potentially participate in local and regional solo/small ensemble or honor band ensembles and events as schedules allow. This course will be of particular interest to students who may be considering continuing their music studies beyond high school.

Prerequisites: Instrumental or Vocal Ensemble 1, 2 or 3 and teacher approval

Music Production 1

Learn how to record and edit sounds from different sources using a variety of microphones and audio equipment. In this class, students are introduced to the concept of transformation, where sounds can be manipulated using the basic five editing techniques to create rhythmic and melodic patterns. Practice layering, looping, chopping, and arranging using a professional digital audio workstation (DAW) and begin to create examples of musical form which can be developed and varied to make more complete musical experiences.

Music Production 2

Develop more complex and polished compositions using acoustic and electronic sources and work in a variety of environments as you further develop microphone techniques, sampling, editing, mixing, and mastering. Focus on uncovering your own personal workflow. Create and curate your personal sound libraries and sample banks. Apply your compositional skills to a variety of challenges including soundtracking, mashups, remixes, and covers. At Level 2, students have the opportunity to collaborate with their peers, work with different DAWs, and experiment with tracking and mixing live sessions on the 48-track console. In this course, you will work towards completion of a diverse portfolio which will include your own compositions as well as your analysis of other works.

Prerequisites: Music Production 1 or teacher approval

Leadership

Ethics and Leadership

Leaders frequently encounter ethical dilemmas. This course will provide the tools for the student leader to navigate ethical problems. Ethics isn't about what is right and wrong; rather, it is about the principles used to discern what is right. In a world where objectivity is becoming more difficult to identify, the student leader must be equipped with the tools to tackle tough issues. In this course, students will study ethics, a branch of philosophy. They will learn several schools of ethics including Deontology, Utilitarianism, Egoism and Virtue Ethics. Then through a case study approach, students will reason through ethical situations by justifying their response using sound ethical principles. The case studies will involve leadership from presidents, company executives, and entrepreneurs. In addition, case studies of ethics involving medicine will be used.