



# DREW SCHOOL COURSE CATALOG 2022-2023



*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 24 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 world view 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 world views? 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 yourselves. 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 with understanding and responding 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. All of our work helps you develop your individual voice, within a learning community and beyond.

## **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: Junior Seminars - Considering Context**

You will engage in college-style seminars that allow you to explore areas of personal interest while focusing on the following overarching essential questions: What does it mean to be American? What can literature teach us about the American experience and the experiences of Americans? How is the human experience impacted by identity and by context, considering both time and place? And how do I apply historical and cultural contexts to fully understand a text?

These questions serve as the intellectual core of our English 3 curriculum. 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. You will explore these complex texts and ideas through in-depth, sophisticated conversations and writing. You will continue to practice adapting form and language to accomplish your communication goals, while working to develop your unique perspective and writing voice.

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*

### **Each seminar below has an Honors and a Non-Honors option:**

#### **The American Dream**

What is the American Dream? How does it intersect with American identity? Is there such a thing as “American” identity? What are American values? To what extent is the American Dream still relevant today? You will seek to answer these questions as you explore literature written by American authors across the changing landscape that is America. From colonial to contemporary, you will explore how each author confronted the themes and conflicts of their time, through the lens of identity--the author’s and your own.

#### **Truth, Lies & Fake News**

This course, like our world today, is bifurcated. We’ll consider the nature of truth in fiction, asking: When we tell stories, whether in song, poetry, drama, film or prose, are we telling lies? We’ll also turn our attention to non-fiction, considering: Who benefits from disinformation? And why? We’ll examine our own attention in a digital realm, examine the tools of rhetoric and propaganda, then seek to untangle the roots of misinformation in preexisting ideologies. Ultimately, we will think past fake news and media literacy to consider the global implications of disinformation.

### **English 4: Senior Seminars—Beyond The Text**

Students continue to 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 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 English 4 curriculum. You will independently and collaboratively make meaning of texts by seeking out and making connections to other texts, to historical and contemporary world events, and within the literary world. All courses sharpen your writing skills and develop your unique writing voice.

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*

**Each seminar below has an Honors and a Non-Honors option:**

### **Outsiders & Rebels**

We're already familiar with the stories of the majority, the mainstream, and those content with the status quo. This course instead focuses on experiences of the outsider and voices that have been left out or obscured. Our authors have chosen to tell stories that might be missing and need to be heard. Some of the stories might speak to your own experiences, and others might illuminate new perspectives. The outsider offers unique insight into the world around them--its beauties as well as its flaws. While belonging is a central theme to many of our texts, there's also the question of how and why people reject society--its expectations and rules. And finally, this course highlights the rebels who push for change and reshape our 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

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 throughout history, and their choices, shaped our contemporary world.

## **U.S. History**

From 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, you will analyze a variety of primary and secondary sources--letters, cartoons, journals, scholarly articles--and refine your critical thinking skills and intellectual voice.

You 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 the corresponding course but at an accelerated pace with additional depth, resources, and assessments. Department recommendations 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 Electives

### History of the United States Since 1945: Honors and non-Honors options

1945 was a pivotal moment in United States history due to the significant geopolitical, social, cultural, and economic consequences of World War II. To examine the postwar period and its reverberations, we will explore varying definitions of American freedom, national identity, and the struggles to expand rights and access to power. We will investigate these throughlines by paying particular attention to issues of race, gender, identity, class, and culture.

This course will be centered on discussion and collaboration to aid in the development of historical thinking, analysis, and writing. Students will debate, assess sources, engage in independent research, and go through the process of oral history-making from interview to publication.

Honors classes explore similar topics as the corresponding course but at an accelerated pace with additional depth, resources, and assessments. Department recommendations 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 for Honors: Department approval*

### 20th Century World History: Honors and non-Honors options

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.

Honors classes explore similar topics as the corresponding course but at an accelerated pace with additional depth, resources, and assessments. Department recommendations 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 for Honors: Department approval*

## Race and Gender Studies

This course will introduce students to the major questions and theories of race, gender, sexuality, class, intersectionality, and power. We will approach these concepts as social phenomena, examining the processes through which people are categorized and how these processes shape individual experiences throughout the world. Students will examine the formation of systems of power, oppression, categorization, and inequality in our society. Students will explore the potential for justice, social change, and celebration of identity. This course is centered around community praxis with the intent of empowering students to think critically about the world they are living in and to be involved in community.

## Economics

We will hone in more specifically 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. Later, 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.

## **Art History**

This course examines global art traditions through the lens of social change. Each unit presents case studies through which we will explore the functions of art: art as power; personal and communal expression; social action; experience. Through close observation of diverse works—paintings, prints, architecture, and various kinds of crafted objects—we will examine the place of art in times of rupture, and ask: How does art reflect or critique culture? How does art serve or disrupt structures of power? We will expand our conception of the classroom to our urban environment by going on field trips to see public art, museums, and murals. The course honors personal interest and curiosity; each unit culminates in an exploratory project chosen by students.

## **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.

## **Interdisciplinary**

### **Leadership and Social Entrepreneurship**

You will harness the tools of business to effect positive social, cultural, and environmental change both within the Drew community and beyond. Key to successful entrepreneurship is sound leadership skills. You will study the theory of leadership and how principled-centered leadership will lead to success. You will learn to be an effective social entrepreneur through a study of the history and theory of social entrepreneurship, with training in the basics of business management.



# Mathematics

**Graduation requirement** Three years; four recommended

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.

## Math 1: An Intro to the Language of Mathematics

*"The Universe is a grand book which cannot be read until one first learns to comprehend the language and become familiar with the characters in which it is composed. It is written in the language of mathematics."*  
--Galileo

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

*"Geometry will draw the soul towards truth."* --Plato

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**

*"Algebra is nothing more than geometry, in words; geometry is nothing more than algebra, in pictures." --Sophie Germain*

The words of 18th century mathematician, Sophie Germain, reveals the interconnectedness of the two disciplines. In your Math 3 course, 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 Precalculus as preparation for the study of Calculus.

### **Math 3/Precalculus: Navigating the Complex World of Functions**

*"We need to replace the idea that learning ability is fixed with the recognition that we are all on a growth journey."--Jo Boaler*

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, placement test, and teacher recommendation*

## An Introduction to Data Analysis: Big Data!

*“Data has become a torrent flowing into every area of the global economy.” --McKinsey Global Initiative Report on Big Data*

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 R, an open-source 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 is designed for students desiring an alternative to Math 3 that is validated by the University of California A-G math course requirements. This excellent option can be taken after Math 1 and Math 2 and in place of Math 3)*

## Precalculus: Modeling the World with Function

*“As long as algebra and geometry have been separated, their progress has been slow and their uses limited; but when these two sciences have been united, they have lent each mutual force, and have marched together towards perfection.” --Joseph-Louis Lagrange*

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 Precalculus, 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 the “handmaiden” to 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*

## Finite Math for Social Justice

*“All students need to be able to use math as a window to see the world, and a mirror to see themselves and their experiences, their communities.” -Robert Berry, NCTM Past President*

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*

## **Statistics Honors: Modeling for Prediction**

*"The key is in remembering that a model is a tool to help us understand the complexities of the universe, and never a substitute for the universe itself."--Nate Silver*

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 and teacher recommendation*

## **Calculus Honors: The Study of Change**

*"As its campfires glow against the dark, every culture tells stories to itself about how the gods lit up the morning sky and set the wheel of being into motion. The great scientific culture of the West--our culture--is no exception. The calculus is the story this world first told itself as it became the modern world." --David Berlinski*

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*

## **Calculus Lab: Investigations & Applications**

*"The only constant in life is change." --Heraclitus*

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: Precalculus*

## **Programming 1: Introduction to Programming**

If you are interested in getting started with a STEM field, this course is designed for you regardless of your programming skill. Using the Processing programming language, the course will introduce you to the fundamental concepts of programming and Computer Science.

Processing is designed for artists, designers, and game developers to create visual and interactive programs that include video games, data visualization, and digital artwork. Thus, all of your programs will be grounded in creating those same types of programs. The course will delve deeply into problem-solving building on your computational and abstraction skills, and you will learn the basics of Object-Oriented Programming.

Topics include data types, conditional structures, methods, arrays, objects and classes. 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, this class builds on those lessons and introduces new ones. Continuing with the Processing programming language, 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 design concepts that will guide your development process. Programming topics include multi-dimensional arrays, switch statements, advanced geometry, and animating sprites. 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 digital artwork.

You will engage in group lessons to introduce new concepts and work on short practice exercises in small groups. 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 by Teacher/Department Head permission. (Students must have a basic understanding of Object-Oriented Programming)*

# Science

## **Graduation requirement** 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**

As 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.

## **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 additional 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 an additional 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 additional 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*

## 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 healthcare 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*

## Environmental Science & Policy

Environmental Science & Policy is an interdisciplinary class where you will engage with real world issues. It will encompass science, legislation, history, economics, philosophy and politics. The class explores principles of environmental policy, the history of land and water use in California, everything related to climate change, the energy industry and environmental justice and equity.

Through case studies and simulations, you will act as environmental scientists, policymakers, and consultants. You will work individually and in groups on a series of open-ended projects. Many of the topics covered have no "right solution" and reflect existing debates between environmentalists themselves. You will explore environmental issues globally as well as locally. We will go out into the community to investigate environmental issues affecting San Francisco. This class is ideal if you are curious about the environmental issues seen in the news and ready to tackle complex challenges.

*Prerequisite: Biology*



## **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 applications in marine environments.

*Prerequisite: Biology*

## **Molecular Biology & Biotechnology**

Explore the interdisciplinary world of biotechnology, using scientific literature, hands-on experience, and research projects to investigate the many applications of biotechnology in the modern world. Topics covered include historical biotechnology, cell culture, gene expression, genetic engineering. You will learn the essential skills, understandings, and laboratory techniques involved in practicing molecular biology. For example, you will genetically engineer bacteria to produce a foreign protein. Throughout the course, you will also consider the bioethics of the many current and potential applications of biotechnology.

*Prerequisite: Chemistry*

## **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**

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 for you if you are interested in taking chemistry-related courses in college.

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

## Advanced Topics in Physics Honors

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 you if you have an interest in becoming a scientist because the class will make links to real-life research questions and prepare you for college-level problem solving.

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

## Intro 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 electrical, civil, mechanical, and other engineering related fields. A lesson in engineering might teach you how to calculate the strength of materials used to build bridges, how to conduct independent research of various bridge designs, and then ask you to design your own bridge in a competition. This hands-on class is perfect for the creative problem solver and anyone who is considering a future in engineering.

*Prerequisite: Chemistry 1*

# World Languages

**Graduation requirement** Two consecutive years in the same language. Three or four years in the same language is recommended.

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 start by learning to sign each letter of the alphabet which allows you to finger spell words. At the same time, you 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 also learn handshapes, classifiers, as well as 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.

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 American Sign Language.

## 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 their 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 textbook 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 future tense 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 their own lives and experiences.

For 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 on-line textbook, Antoine de Saint Exupéry's novel, 'The Little Prince,' authentic sources from the Internet, and supplementary materials created by the teacher. As your final project, you will use the online platform BookCreator to write your own chapter of The Little Prince, drawing inspiration from material in the novel. 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, video confessionals).

In addition, speaking skills are developed through a series of storytelling activities and oral presentations. A textbook, T'es branché, 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 only speak French in the classroom.

## AP French

The AP French Language and Culture course is structured around the six College Board suggested 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.

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. You will prepare for the AP Exam in part by completing tasks mirroring those seen on the actual AP Exam under the same time constraints of the official exam.

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

## Advanced French

The Advanced French class is designed for those students who have successfully completed the AP French Language course and would like to continue their study of French. 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. You will also act as mentors to the current AP students and enrich AP classroom discussions through formal presentations and student-led activities. 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: AP French and Department approval required.*

## 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 skill 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 during Mandarin 1 and Mandarin 2. During 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 Chinese, 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. This course 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 further strengthen 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

## 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. Understanding of the Spanish-speaking world is promoted through the use of culturally rich authentic materials. Through mini projects, you will acquire a diverse vocabulary encompassing culinary traditions, festivities, shopping, and daily routine. Additionally, this course advances your grammar through a variety of mini compositions. 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 is a project-based course that incorporates many real-world elements and allows ample opportunity to create independent work for presentations (a regional cooking project and presentation, for example).

For your final project, you will use the online platform, BookCreator, to write a myth-audiobook incorporating much of the grammar and vocabulary that you will have learned over the course of the year. 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) by teaching it to your classmates.

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 cerpts 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/AP 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 readings and discussions on cultures and peoples whose primary language is Spanish, emphasizing similarities and points of contrast with the culture of the United States. The course is taught entirely in Spanish, and you are expected to communicate with your classmates and with the instructor in Spanish.

This course makes ample use of technology as a mode of exploring the Spanish-speaking world. As a final project, you will create a website with a report about a Spanish-speaking country of your choice. The site will include a variety of videos analyzing the relationship of your chosen country with the United States at a historical, political, military, economic, social, and cultural level.

## 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 short story in Spanish by a variety of Spanish-speaking authors. Students keep journals and write essays to practice different language registers at the written level. They lead and participate in informal conversations as well as doing formal oral presentations to the class. They also watch webnovelas and participate in cultural excursions in San Francisco.

Additionally, students immerse themselves in project-based learning that requires them to engage with the Spanish-speaking world through newspapers and web-based publications. 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. You 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 you are expected to communicate with classmates and their instructor in Spanish.

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

## AP Spanish

The AP Spanish Language and Culture course description published by the College Board determines the content of this course: "The AP Spanish Language and Culture course emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational skills in real-life situations.

This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP Spanish Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. To best facilitate the study of language and culture, the course is taught exclusively in Spanish.



The AP Spanish Language and Culture course will engage you in an exploration of culture in both contemporary and historical contexts. The course develops your awareness and appreciation of cultural products (e.g., tools, books, music, laws, conventions, institutions); practices (patterns of social interactions within a culture); and perspectives (values, attitudes, and assumptions)."

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

## **Advanced Spanish**

The Advanced Spanish class is designed for those students who have already completed the AP Spanish Language and Culture course and wish to continue to deepen their cultural and linguistic understanding of the Spanish-speaking world. 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 at the same time 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 AP students and enrich AP 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: AP Spanish and Department approval required*

# Visual and Performing Arts

**Graduation requirement** Two years.

The Drew Arts Program develops the creativity, talent and technique of our students with an authentic and engaging combination of hands-on studio time, theory, analysis, and critique. Extensive and diverse offerings span all skill levels, as we aim to address the needs of both beginners and advanced students.

You will integrate theory and practice in each discipline as you utilize Drew's dynamic environment to experiment, collaborate and, ultimately, grow in your craft. By practicing making art, you will achieve mastery while developing your individual voice. Drew prepares you to apply the creative process to the arts and beyond. You will make use of Drew's dedicated studios for both visual and performing arts through traditional and digital media. You will also integrate the city as an extended lab for museum trips, artist visits, and working on location.

## Visual Arts

The Visual Arts Department at Drew invites students to have authentic and engaging experiences in our studio spaces. Each course, through a wide range of traditional and digital approaches, is designed to help you build your skills, explore your own ideas and observations of the world, and help you understand how to express your point of view visually. We value the creative process of brainstorming, iterating, and gathering feedback for revision as a method that you can apply to the arts and beyond. You will also integrate the city as an extended lab that offers locations for creative projects and exposure to museums and outside artists. Art is ultimately about communication and each course will invite you to make those steps toward developing a personal voice.

## Digital Filmmaking 1

How do moving images connect with viewers and communicate human experiences? How do movies convey stories and how are they made? Students in this class will learn about the skills and techniques used by filmmakers to create short experimental films. Even the most abstract imagery can convey emotion, narrative, and popular genres. It's the poetry of cinema! Class projects will help you build skills with cameras, cinematic shot styles, editing, and sound in order to express yourself visually.

You will work on a number of personal projects each semester. Students will be filming their own diverse footage in and out of class. Our daily steps will focus on expression through cinematography and editing choices and on gathering feedback through critique. We will also look at samples of historic and international works every week in order to expand your own toolbox of styles and ideas. Projects culminate in two gallery walk events.

*Prerequisite: Drawing & Design 1 or teacher approval*

## Digital Filmmaking 2

How do filmmakers combine visual thinking and story structure to create advanced experimental and narrative movies? Students in this class will deepen their skills and techniques with cameras, cinematography, editing, and sound in order to build more complex projects. You will work on a number of films each semester in order to communicate your ideas and to explore aspects of visual poetry, character development, empathy, and plot that are essential to cinematic storytelling. There will also be opportunities for collaboration.

Students will be filming their own diverse footage in and out of class and the emphasis will be on visual innovation and expression. Our daily steps will focus on advancing projects through screenwriting, cinematography, editing choices, and on gathering feedback through critique. We will also look at samples of historic and

international works every week in order to expand your own toolbox of styles and ideas. Projects culminate in two gallery walk events.

*Prerequisite: Digital Filmmaking 1*

## **Drawing & Design 1**

What fundamental skills and understandings help prepare you for success in a range of visual arts? In this class, you will explore how line, shape, color, texture, value and space become the building blocks of strong design across the arts. You will work with a wide range of materials, including pencil, acrylic, watercolor, and collage techniques. Units will include drawing still-life subjects, portraits, painting, and designing personal projects such as book covers, posters, and images to express your own ideas about identity and important causes. We will focus on 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 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. Develop skills such as loose sketching and deeper observational drawing. You will have opportunities to explore computer aided design tools and understand their role in a variety of fields.

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*

## **Graphic Design 1**

What is graphic design and why is it important? You will learn the fundamentals of two-dimensional design, the foundation of art, graphic design, and visual communication. You will learn and practice the design process and explore it through a simple five-step plan. You will focus on how through simple, yet intentional visual manipulation, points, lines, planes, gestalt, and color can communicate and create meaning.

You will create collages, colorize and restore old family photographs in Photoshop. Additionally, you will create your own logo, branding an Infographic poster as well as laser cut products in Illustrator. Adobe Suites is used to help you master presentations, posters, and class projects. 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*

## **Graphic Design 2**

In this class, you will build on your foundation in Graphic Design while improving your creative and critical thinking skills. You will practice the design process in order to find solutions to a number of visual communication goals and problems by identifying each step in the design process, understanding the importance of each step, and then implementing them. In order to solve a problem, designers need to understand it. Sometimes what is presented and described as the problem actually is not. Learning about the problem through a deliberate systematic search for knowledge helps the designer improve their work.

Projects include designing a game board, yearbook, and political posters. You will develop a body of work through a concentration project of your own designs.

*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 piece of “found art” 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 by creating opportunities to reflect on individual work and the “art world”. 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 experimentation, 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

They say a picture is worth a thousand words. There is something powerful and poetic about photography where even the most common sites can visually communicate our human experiences. Students in this class will learn about the skills and techniques used by photographers to create interpretive images. Photography includes many genres and you will use tools such as cameras and editing to master various styles and to express yourself through pictures.

Foundation assignments will cover aspects such as composition and design, defining space, close-ups, pictorial lines, motion, abstraction, reflection, authentic portraits, and aesthetic choices. You will also work on a number of personally-designed projects throughout the year in order to understand how to build a cohesive body of work for portfolios and books. Students will be taking their own diverse images outside of class time. Our daily steps as a group will be focused on expression through your composition and editing choices and on 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 styles and ideas. 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 move closer to developing a style that communicates personal vision? Expand your visual literacy as an artist by honing skills through assignments such as poetic interpretation, abstraction, expressionism, surrealism, design portraits, lighting, collage, and multi-frame images. You will also work on a number of personally-designed projects throughout the year in order to build a cohesive body of work for portfolios and a book-publishing project. Students will be taking their own diverse images outside of class time. Our daily steps as a group will be focused on expression through your composition and editing choices and on 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 styles and ideas. 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 as well as 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 foundation 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 is sculpture made and why? Sculptures are made with a variety of materials and three-dimensional forms. You will learn the basic concepts and vocabulary terms generated by the contemporary art world while exploring how this specialized language has evolved during the late 20th and early 21st centuries.

You will explore with wire, wood carving, paper mache, clay stop motion, installation and found objects. You will develop collaborative skills and come to understand the way contemporary art frames broader social realities while in turn, understanding how economic, political, and technological changes alter the practice of art and culture. 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*

## **Sculpture 2**

In this class you will investigate new techniques while improving your creative and critical thinking skills. You will address a broad interpretation of sculptural issues in depth and space. The issues may include mass, volume, form plane, light, and texture. Such elements may be articulated through additive, subtractive techniques, while exploring a variety of media including clay, wire, plaster, wood, and assemblage. You will explore and experiment with installation art as well as video.

You will create a body of related work and learn how to sustain a creative practice through experimentation, concept development, and curating your work with the help of the critique process. As you reflect on how you go about your sculpture practice, you will find sculpture can be about self-discovery and finding your voice as an artist. Projects culminate in 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, 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 course and teacher approval*



## Performing Arts

The materials we use in Performing Arts classes are an intentional departure from more traditional scholastic models which draw mainly from the Western Classical canon because we believe that this fosters an inclusive environment in which everyone's story is valued, and we want students to know the source stories of the popular forms they gravitate to on their own.

Theater at Drew is 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.

Music at Drew is a subject in which you can immerse yourself, just as you would with any other academic subject. This is possible because your ensemble is the class, and meets just as often as any of your other subjects. 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.

As opposed to traditional orchestra and band programs, Drew's Ensemble program fosters individual autonomy. Rather than following from the back of a large section, Drew students learn from the outset to develop their musical voices through collaboration, authentic practice and in developing leadership skills.

Music Production is an immersive experience in which students explore the creation of music using digital and acoustic sound sources. Beginning with the mechanics of sound production, propagation and perception, and moving through a variety of modules, students will work individually and in small groups on technical and creative projects that serve as an introduction to the elements of sound design and musical composition using recording equipment and digital editing tools.

## Broadcast Media

Think of this course as Greenscale Productions 2.0 ... 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.. The various roles students will learn include: writer, producer, director, anchor, cameraperson, sound engineer, editor, lighting design, and hair/make-up work. The students' video-based work will generally be short-form pieces in a variety of genres including newscasts, documentaries, interviews, think pieces, investigative work, and humor; podcasting is a possibility as well. 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.

## 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 theatre artists: actors, directors, technicians, designers, and playwrights.

## Theater Ensemble 2/3

In Theater Ensemble 2/3, you will continue to explore the art of transformational performance and assume 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. Class work concentrates on expansive text analysis, rehearsal, and performance. 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.

## 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.

## 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 of 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

Theater Production 2 is 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.

In Theater Production 2, 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.

## **Instrumental and Vocal Ensembles**

As opposed to traditional orchestra and band programs, Drew's Ensemble program fosters individual autonomy. Rather than following from the back of a large section, 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.

### **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 projects. You will also be encouraged to participate in local and regional solo/small ensemble or honor band ensembles and events, as well as performing regularly for the school community. This course will be of particular interest to students who may be considering continuing their music studies beyond high school.

### **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 commensurate experience as approved through the department*

## AP Music Theory

Deepen your awareness of harmonic, rhythmic, and textural elements in composing music of diverse styles and genres. You will cover much of the AP Music curriculum in a project-based format, exploring voice-leading, chord progressions, harmonizing melodies and bass lines, and arranging music for different musical instruments. A capstone project gives you an opportunity to hear your work performed by a professional ensemble and thus complete the cycle of creating written music for performance, from inspiration to completion, hearing and assessing the results, giving and receiving feedback, and, ultimately, progressing towards mastery of your own musical voice.