



Derryfield Upper School

---

2022–2023

# CURRICULUM GUIDE



# US SCHOOL CURRICULUM GUIDE 2022-2023

(\*Subject to change.) REV 3/3/22

## STATEMENT OF PHILOSOPHY

The Derryfield School's purpose is twofold: to guide a student's academic growth through the acquisition of sound study habits and the development of analytical, independent thinking skills; and to foster each child's social, emotional, and ethical growth.

We value our distinctive role as a day school, providing a robust, challenging program in academics, athletics, and the arts to children whose families want them to live at home during their middle and high school years. Dedicated to providing individual attention to every student, we strive to create an informal, yet structured environment offering challenge and support where students can develop their unique qualities of mind, body, and spirit.

We respect diverse ideas, beliefs, and cultures, and are committed to personal integrity and fairness. We value tradition as well as the willingness to institute thoughtful change. Recognizing that academic achievement without compassion and concern for others is meaningless, we are committed to purposeful involvement in the world outside our School in both the local and the global community.

### Links to Department Sections:

[ACADEMIC SUPPORT](#)

[CREATIVE ARTS](#), [VISUAL ARTS](#), [MUSIC](#), [DRAMA](#)

[ENGLISH](#)

[HISTORY](#)

[MATHEMATICS](#)

[SCIENCE](#)

[STEM X](#)

[WORLD LANGUAGE](#)

[ATHLETICS](#)

### KEY

IS Independent Study

AT Advanced Topics

MSON Malone Schools Online Network

F Fall Trimester Elective

W Winter Trimester Elective

S Spring Trimester Elective

Note: If a course is designated as (F, W, S), it is offered three times a year. A student may take it during any term, and in some cases all three terms.

## THE UPPER SCHOOL PROGRAM OVERVIEW

Students entering the Upper School (grades 9–12) should plan their course of study in the context of graduation requirements, college plans, and interest. A well-balanced program that expands perspectives and deepens experiences in interest areas is desirable. All students must take a minimum of five (5) academic courses each term.

### Graduation Requirements

Students must successfully complete a fundamental liberal arts course of study, develop essential physical skills, and expand interests and competence in creative arts and co-curricular activities. A total of eighteen (18) academic credits is required with the following departmental distribution:

- English: 4 credits
- History: 2 credits (Histories of Modern Asia and Africa and U.S. History or AT American Public History)
- Mathematics: 3 credits (in grades 9-12 and completing at least Algebra II)
- World Language: 3 credits (must successfully complete level three of one language; two levels must be completed in the Upper School)
- Science: 2 1/3 credits (Biology and Chemistry, plus one trimester elective)
- Creative Arts: 1 credit (three trimesters)
- Computer Science: 1/3 credit (Computer Science Practice and Principles in 10th grade)
- LEAD (Leadership, Ethics, and Development): All students must satisfactorily participate in LEAD each year.
- Athletics: All students must satisfactorily participate in either a team sport, an independent sport, or a noncompetitive sport two (2) out of three (3) trimesters each year.

### The Upper School Program of Studies

Grade 9 Standard:

- English IV, Honors English IV
- Advanced Algebra, Geometry, Algebra II, Honors Algebra II
- Biology, Honors Biology
- World Language
- Histories of Modern Asia and Africa: Confronting Imperialism
- Creative Arts electives
- STEM X electives
- Leadership, Ethics, and Development (LEAD)
- Academic Foundations elective
- Note: A student need not take six courses during grade nine in order to fulfill requirements for graduation. Students who express interest in art electives should pay attention to the prerequisites. Academic Foundations is available for credit for one trimester.

Grade 10 Standard:

- English V, Honors English V
- Geometry, Algebra II, Honors Algebra II, Honors Algebra II & Precalculus, Precalculus, Honors Precalculus, Calculus, Honors Calculus, AT Calculus
- Chemistry, Honors Chemistry

- World Language
- History of Latin America: Riots, Revolutions, Reforms, History of Europe: Riots, Revolution, and Reforms
- Leadership, Ethics, and Development (LEAD)
- Computer Science Practice and Principles (required) and other STEM X electives
- Creative Arts electives
- Academic Advancement elective

#### Grade 11 Standard:

- American Literature and Composition (Embedded Honors), AT English: Exploring Effective Civil Discourse in American Literature and Culture
- Algebra II, Honors Algebra II, Honors Algebra II & Precalculus, Precalculus, Honors Precalculus, Calculus, Honors Calculus, AT Calculus, Statistics (Embedded Honors)
- Lab Science or STEM X
- World Language
- U.S. History, AT American Public History
- Leadership, Ethics, and Development (LEAD)
- STEM X electives
- Creative Arts electives
- Academic Advancement elective

#### Grade 12 Standard:

- English electives (Embedded Honors), Advanced Topics in Literature: Critical Lenses
- Precalculus, Honors Precalculus, Calculus, Honors Calculus, Statistics (Embedded Honors), AT Calculus, AT Investment Math
- World Language
- Lab Science or STEM X
- History electives (Embedded Honors), AT History: US Since 1960
- LEAD (Leadership, Ethics, and Development)
- Creative Arts electives
- Academic Advancement elective

### **Advance Topics (AT) Courses**

Derryfield offers three levels of courses in the Upper School: Advanced Topics, Honors (stand alone or embedded) and Regular. Advanced Topics courses are the most intellectually rigorous courses offered at Derryfield. These courses are designed around critical-thinking, collaboration, creativity, communication, and research curation. Often interdisciplinary, they include either a Buck Institute Gold Standard Project or a significant research project with a public element. College level courses, the pace is rapid, the material complex and the demands significant. Advanced Topic courses will not prepare students for AP exams.

ATs are designed for students who have mastery of the relevant Portrait of a Derryfield Graduate skills, are high level critical thinkers, and who have the ability to both learn independently and quickly absorb large amounts of material. Some Advanced Topic courses have specific prerequisites, but not all. Students are recommended by the department for these classes during our course sign-up process; the criteria for readiness for the demands of our AT courses requires the student to:

- display intellectual curiosity during and beyond class.
- score consistently in the highest grade range in the current class in the discipline.
- be open and willing to engage in perspective taking.
- take initiative, drive their own learning, and collaborate well.
- engage at high levels in class activities such as class discussions, debates and labs.
- coordinate and engage at a high level in sustained research and interact with and present to experts in the field.
- identify and distill key course concepts.
- draw inferences and derive deep meaning from reading and research.
- self-advocate and ask questions to build understanding.
- be responsive and follow through on feedback.
- manage this year's homework load and meet deadlines.
- use writing conventions and express thoughts in multiple types of writing.
- balance more than one AT course.

### **The Malone Schools Online Network**

As a member of the Malone Schools Online Network (MSON), highly motivated and strong Independent juniors and seniors can take synchronized, online classes from other independent schools from around the country. If a student is accepted to the program, Derryfield covers the cost of the class, and the class can count as a fifth or sixth class and earn full Derryfield credit. Due to space and placement criteria, sign-up for a Malone class does not guarantee enrollment in the course. All the Malone classes are listed in the MSON Course Catalog 2022-23. Interested students should see Mrs. Ek to receive an application and to obtain more information. Applications to participate in MSON are due to Mrs. Ek by April 12, 2022.

Malone Schools Online Network Course Catalog Online:

 [\\*MSON Course Catalog 2022-23\\*](#)

### **The Independent Senior Project (ISP) Program**

During the final five weeks of spring term all seniors are required to complete an Independent Senior Project. While seniors develop their proposals for ISPs in LEAD during the winter term of senior year, advanced planning in preceding years is recommended to assure all graduation requirements are completed and to consider possible ISP topics. The nature of the project is completely up to the student, although the program philosophy encourages “real world” structured experiences. The Alumni Coordinator, who serves as a liaison with alumni and the Derryfield community at large, can suggest possibilities for internships and apprenticeship.

Seniors can also refer to the documentation of earlier projects undertaken since the program's inception in 1985. These projects have been as diverse as the individuals who participate: interning in hospitals and law firms, acting as teachers' aides, doing site work in archeology, studying ecology in Costa Rica, or interning at radio and T.V. stations.

Seniors complete all coursework prior to the beginning of the ISP. During the project period, a maximum of one sport may be taken. Contact Dr. Myers for further details.

### **Exploration Courses in the Upper School**

Exploration Courses, which are offered two blocks out of our eight day rotation, are designed to immerse students and faculty in experiences and pursuits that inspire new interests, broaden skills, and sharpen

awareness of the community outside of the classroom. Rooted in academic and real world skills, they are designed to encourage students and faculty to take risks, to be playful, and to venture into new territory such as beekeeping, forensics, sports casting, podcasting, journalism, academic competitions such as Robotics, Model UN and Math Team, and more. Student sign-up for these classes will take place in the late spring. *These courses are graded pass/fail.*

## **UPPER SCHOOL COURSE OFFERINGS**

### **Leadership, Ethics, And Development (LEAD)**

The Upper School LEAD program cultivates leadership, ethics and the development of health and well being. In grade-specific, small groups, students participate in active discussions, activities, and self reflections centered on the theme that everyone has the ability to lead. Students explore the many forms that leadership takes, and are encouraged to find avenues to exhibit their inner leader. These lessons are designed to foster healthy decision making as students gain increased independence in various areas of their lives. Topics and activities explored during LEAD include, but are not limited to Mindfulness/Yoga, Colors Personality Survey, YouScience College Aptitude Program, Pathways and Zentangle. *These courses are graded pass/fail.* Students successfully pass LEAD by understanding and engaging in class discussions and activities.

## **ACADEMIC SUPPORT**

### *THE PHILOSOPHY*

In the academic support department we strive to meet students where they are as learners and help them grow and develop. We pride ourselves in cultivating a warm and friendly environment. All students, no matter if they are challenging themselves to take a higher level course or if they are meeting the basic requirements of an introductory level course, are welcome to enroll in a class.

### *THE OBJECTIVES*

In this department we seek to support students as they develop:

- close reading and writing skills across the curriculum.
- effective study skills for expanding their knowledge of content.
- time management and other executive functions.
- an understanding of their strengths and challenges as learners.
- confidence in their ability to work through complex problem solving.
- advocacy skills that reflect their unique needs.

### *THE PROGRAM*

#### **Academic Foundation (F, W, S)**

This course is designed for ninth grade students, or those new to Derryfield, who wish to sharpen the basic reading, writing, and study skills necessary for success in the upper school curriculum. Students learn and practice techniques based on the latest brain science that require them to take an active role in their learning. Topics include understanding individual learning styles and memory, organizing materials, planning and using time efficiently, note taking, listening, active reading, test taking, and self-advocacy. Writing process and self-editing skills are also addressed. The student planner, course texts, and class notebooks serve as important materials for applying various learning strategies and developing sound study habits.

### **Academic Support (F, W, S)**

This course is designed for the student who has completed Academic Foundation, has been introduced to a variety of study techniques, and is seeking a program tailored to meet his or her individual learning needs. Each student works with the instructor to develop a plan and practice the specific skills and strategies needed to achieve personal goals. The objective of the course is for the student to gain an understanding of how he or she learns, to adapt study strategies to support learning, and to develop sound study habits. **Course fee is \$1000.00.**

### **Academic Advancement (F, W, S)**

Students who have taken a previous academic support class or who are seeking to fine tune previously developed skills may wish to continue to have support in a more independent way. This course is a transitional step from the structure of Academic Foundation or Support to the informed and effective self-advocacy needed to excel at learning in subsequent years of education. **Course fee is \$500.00.**

## **CREATIVE ARTS**

### *THE PHILOSOPHY*

The Creative Arts Department faculty is committed to promoting artistic excellence through self-discovery, creative expression, and collaboration. Through creative risk-taking and the application of technical skills, our program builds confidence and discipline in students. The Creative Arts program promotes empathy and an appreciation for the artistic contributions of others.

### *THE OBJECTIVES*

The department will provide opportunities for students to:

- conceive and develop new artistic ideas and work including conceptualizing and composing as well as refining work.
- interpret and share artistic work while demonstrating understanding of artistic techniques and communicating ideas and meaning through the presentation of artistic work.
- understand and evaluate how the arts convey meaning through perceiving, analyzing, and interpreting an artistic work and being able to apply criteria to evaluate that work.
- relate artistic ideas and work with personal meaning and external context.
- build empathy through artistic works in an individual, societal, cultural, and historical context to deepen understanding.

## **VISUAL ARTS**

### *THE PROGRAM*

#### **Drawing (F, W)**

Open to: Grades 9-12

Drawing is the foundation of all visual art. This class is designed to refine skills and discover how fun and easy it is to draw both accurately and expressively. In this concentrated study of drawing we will learn to use pencils, pen and ink, markers, graphite, charcoal, colored pencils and other media to define what we see. Drawing from life, the human figure, interior settings, and landscapes, this course will introduce the fundamental elements of a good drawing: accurate perspective, intentional compositions, varied values, rich textures, and intriguing space. This class is recommended for all painters, designers, and interested art students.

### **Figure Drawing (S)**

Open to: Grades 9-12

Prerequisite: Drawing or Painting

This course invites students to explore drawing the human figure, while reinforcing fundamental drawing techniques. Working with a live model, students will develop an understanding of the basic anatomy and proportions of the human form in order to render it accurately. We will revisit the elements and principles of art and design, as well as composition, and observational drawing methods. Once a foundation is achieved, students will also explore the expressive and conceptual possibilities of figure drawing.

### **Painting (W, S)**

Open to: Grades 9-12

Prerequisites: Drawing

This course is an introduction to color theory and practice. The elements of design and the unique characteristics of colors are explored using watercolor and acrylic paints on paper and canvas. Painting from life, students will solve the creative challenge of representing the world they see. The thrill of putting paint on a surface will be experienced daily.

### **Ceramics (W)**

Open to: Grades 9-12

This course will cover the expressive and creative aspects of clay. Students will learn the fundamentals of hand building— from coiled vessels to slab-built sculptures. Mold-making, stamping, glazing, and painting techniques will all be explored as students create decorative, sculptural, and functional objects. Students will develop proficiency in working with clay, developing at least five unique ceramic forms over the course of the term. Assignments will explore sculptural form, surface marking, and color aspects of ceramic art.

### **Digital Photography (F, S)**

Open to: Grades 9-12

This course provides students with a foundation in digital photography techniques and composition. Students will develop their technological understanding by primarily working in a manual setting with DSLR cameras, and continue to strengthen their application of the elements of art and principles of design. Their growth as artists will be supported through their exploration of composition as it relates to portraiture, photomontage, landscape, abstraction, and the narrative. Daily use of digital editing software like Adobe Lightroom and Photoshop will help students to refine their photographic images. Presentation of historical and contemporary photographers and techniques, weekly digital sketchbook assignment, as well as regular class and one-on-one critiques will further support student understanding and growth. **All students are expected to use their own digital camera. There are limited loaner cameras available on a first-come, first-serve basis.**

### **Digital Art (W)**

Open to: Grades 9-12

Prerequisite: Drawing

Digital art introduces students to the uses of contemporary media as an art-making tool. By combining traditional art concepts, like the elements of art and principles of design, with various digital technologies, students have the opportunity to develop a diverse digital art portfolio. Topics covered in this course may include image editing and manipulation, digital drawing and illustration, animation, and augmented/virtual reality. Students will use various contemporary media like Adobe CC Suite, digital drawing tablets, and their personal digital devices to

develop creative artworks. Regular class critiques will enhance student understanding and support artistic growth.

### **Graphic Design (F, W)**

Open to: Grades 9-12

Prerequisite: There are no prerequisites for this class, but it is recommended that students take drawing first. Graphic design is the art of visual communication. By combining imagery and text, graphic designers communicate ideas through a variety of dynamic graphic media. Integrating art with technology, students in this course will utilize fundamental art principles with industry standard computer programs like Adobe Photoshop and Adobe Illustrator to effectively communicate a message. Students will develop original works that integrate typography and visual imagery through logo and brand design, promotional materials, and advertising. Regular class critiques will enhance student understanding and support artistic growth.

### **Printmaking (S)**

Open to: Grades 9-12

This course introduces students to a wide array of printmaking processes and techniques that promote experimentation and compositional development. Students will build a diverse print portfolio using various printing techniques, not limited to, monotype, block printing, drypoint etching, and screen printing. Historical and compositional aspects of printmaking, as well as reference to foundations of art and design, will enrich the studio experience and inspire student creativity. Regular class critiques will enhance student understanding and support artistic growth. Students wishing to pursue more advanced studies in this medium are encouraged to enroll in an independent study.

### **Sculpture and 3D Art (S)**

Open to: Grades 9-12

Students will learn to problem-solve creatively through traditional and contemporary ways of working in three-dimensions. Students will learn how to manipulate a variety of materials and use sculpting tools safely. They will analyze other works of sculpture through reading, discussion and critique and examine geometric, abstract and organic forms. Projects will include recycled and found-object, site-specific, and conceptual sculptures.

### **Advanced Studio Art I (Embedded Honors Option) (F)**

Open to: Grades 11 & 12

Prerequisite: 3 trimesters of any visual arts course or with permission of the department chair.

This course is designed for students wishing to explore creating artwork within a more rigorously structured environment. Students will learn and practice the essential skills artists deploy as they claim being a practicing artist for themselves. They will be given the opportunity to experiment with new techniques and materials, or reinforce skills already developed in prior classes. Students will meet professional artists and attend arts-oriented events and field trips. Outside readings, sketchbook assignments, class critiques, and collaborative projects will further enhance and support student artistic appreciation and growth. In-studio efforts beyond the scheduled class time are required to meet the expectations of this class. Junior-level students who wish to develop a portfolio for college applications will find this class especially useful. Seniors already on the path to further artistic study will also be enriched by this intensive, studio-oriented environment. ***Students wishing to earn an honors credit are required to enroll in this course for the year. Additional weekly sketchbook assignments and/or readings will further enrich artistic growth.***

### **Advanced Studio Art II (Embedded Honors Option) (W)**

Open to: Grades 11 & 12

Prerequisite: 3 trimesters of any visual arts course or with permission of the department chair.

This course is built around giving students a chance to explore a single art process or concept in an effort to build a cohesive body of work. This allows students the chance to experience how one can communicate more complex ideas when working in a series. The technical support and logistic concerns of creating an exhibition will be practiced so that artworks created in class can be exhibited during the school year either on-campus or beyond. Students will be able to meet artists with exhibition experience and attend exhibits during arts-oriented field trips. Junior and senior-level students who have an interest in pursuing art beyond high school will be equally benefited by the chance to participate in an exhibition-ready series. ***Students wishing to earn an honors credit are required to enroll in this course for the year. Additional weekly sketchbook assignments and/or readings will further enrich artistic growth.***

### **Advanced Studio Art III (Embedded Honors Option) (S)**

Open to: Grades 11 & 12

Prerequisite: At least one previous trimester of Advanced Studio Art.

This course offers students the opportunity to utilize this class as an open studio to create or continue a series or single work as a part of a thesis. Equipped with the experience explored in prior semesters, students will work around scheduled check-ins and critiques to create work at a high-level. As a benefit of this, they will have much more control over how they spend their time in the studio. Students will be responsible for managing their own time and creative ventures while collaborating with their instructor and peers. Students will also learn how to document their work and promote themselves as creative entrepreneurs. This experience will be invaluable for the high-flying artistic student that plans on pursuing art beyond DS. ***Students wishing to earn an Honors credit are required to enroll in this course for the year. Additional weekly sketchbook assignments and/or readings will further enrich artistic growth.***

## **MUSIC**

### *THE PROGRAM*

### **Concert Choir (F, W, S)**

Open to: Grades 9-12

This choral ensemble is for any student who has a desire to sing (no previous experience required). Concert Choir members learn vocal techniques, how to sing in multiple voice parts, healthy singing habits, music reading, and group dynamics. The repertoire is chosen from many different eras and with differing styles from sacred and spiritual text to modern popular or musical theater pieces. There are three required performances (one per term) at our concerts, as well as field trips and smaller performances throughout the year. Students in the class will also have the opportunity to audition for the NH All-State Chorus, and all students will participate in the All New England Choral Festival at Plymouth State University in November. ***US Instrumental Ensemble and Concert Choir meet during the same block. Any student may enroll in both courses with permission from the instructors. Students may enroll in this course as one or more trimester electives.***

### **Upper School Instrumental Ensemble (F, W, S)**

Open to: Grades 9-12

This course is designed to improve your skill as an ensemble and solo performer. Students will have lessons emphasizing music literature from various periods of history. The ultimate goal of the ensemble course is for all

students to perform at a high level while being exposed to a variety of musical literature. The course is designed to be flexible with the opportunity for student-driven small group ensembles. Through mentorship, leadership, and musicianship, this community grows together and prepares music for All School Assemblies, talent shows, school concerts, and other on and off-campus activities. Individual attention will be given to students in preparation for music festivals, solo, and small ensemble performances. This course is open to anyone with two or more years of experience on their instrument, or with the approval of the instructor. ***US Instrumental Ensemble and Concert Choir meet during the same block. Any student may enroll in both courses with permission from the instructors. Students may enroll in this course as one or more trimester electives.***

### **Concert Choir/Instrumental Ensemble Combined (F, W, S)**

Open to: Grades 9-12

The Combined Concert Choir/Upper School Instrumental Ensemble program allows ninth through twelfth grade students, beginner through advanced, to all meet during the same period, and learn about and make music together. Throughout the week there are large ensemble rehearsals, small group coaching sessions, and the opportunity for student driven small group ensembles. Through mentorship, leadership, and musicianship this community grows together and prepares music for All School Assemblies, talent shows, concerts in the winter and spring, and other on and off campus activities. ***US Instrumental Ensemble and Concert Choir meet during the same block. Any student may enroll in both courses with permission from the instructors. Students may enroll in this course as one or more trimester electives.***

### **Introduction to Piano (S)**

Open to: Grades 9-12

The piano is a popular instrument in all genres of music, and it is one that anybody can learn to play! In this class, you will have opportunities to learn different playing styles from classical to contemporary, Mozart to Billy Joel, Disney to Broadway show tunes. This is a course for anyone who wants to learn how to play their favorite songs, accompany themselves or a friend, or just sit down and experiment with a keyboard for a while. Students will learn playing technique, basic music-reading skills, proper scale fingerings, key identification, and chord progressions. They will then apply these skills to both standard and lead-sheet notation. The class is for beginner piano students, and is designed to go at a comfortable pace for a deeper foundational understanding. If you are an experienced piano player, speak with Mr. Hunton about more opportunities to practice and perform at Derryfield.

### **iSound (F)**

Open to: Grades 9-12

Interested in laying down your own beats, composing your own melody, or actually designing your own sounds? Then this course is for you! “iSound” is Derryfield’s exciting new music course, combining the musical arts with 21st century skills. Students will be able to customize their learning by choosing from either a Sound Production or a Composition path, culminating in a final project. This course encourages individual creativity in the musical style(s) of the students' choosing, whether or not they have a musical background, as well as any non-musical sound design they choose to pursue. By using Soundtrap, an online audio recording studio, students will have access to over 4,000 loops, sound effects and virtual instruments at their fingertips to help them create their desired product.

### **Music Theory (W)**

Open to: Grades 9-12

Music is the universal language. Through this engaging course, students will develop their musical skills, and basic understanding of music. Students will explore melody, harmony, rhythm, and form while refining understanding of notation, scales, key signatures, and intervals. By the end of the course, students will be able to confidently read and write music. There will be many opportunities to interact and collaborate with one-another on projects and assignments. Perfect for the beginner or the advanced musician, this course is designed to bring your musicianship to a higher level.

## **DRAMA**

### *THE PROGRAM*

#### **Public Speaking (F, W, S)**

Open to: Grades 9-12

At some point or another, we are all called upon to speak in public, be it a commencement speech, speaking at an assembly, a business presentation, or a toast at a wedding. This course is designed to help those students seeking to improve their skill at speaking before a live audience by focusing on the techniques of voice and body control (breathing, intonation, volume, articulation, gesture, posture) that will give them the self confidence to deliver a successful speech. Students will learn the various forms of public speaking: informative, demonstrative, persuasive, and extemporaneous speeches, as well as learning the necessary skills for one-on-one and team debating. They will examine famous historical speeches and TED talks to decipher what makes a speech successful. Students will experience writing original speeches and presenting them in a public forum. ***This course fulfills one third of the Creative Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12 by written permission.***

#### **The Composition of Film (F, W, S)**

Open to: Grades 9-12

Storytelling has been the lifeblood of civilization. The rules for telling those stories, however, changed forever with the advent of moving pictures. Students will look at the advancement in American filmmaking by viewing, analyzing, and critiquing some of the most important films that changed the techniques of how movies are made from such esteemed directors as Charlie Chaplin, Orson Welles, John Ford, Alfred Hitchcock and Martin Scorsese to the present day directors such as Kathryn Bigelow, Greta Gerwig, Spike Lee, and Jordan Peele. They will analyze how film narratives have changed as people of color and women have become major voices in Hollywood. ***This course fulfills one third of the Creative Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12 by written permission.***

#### **War in Film (W)**

Open to: Grades 9-12

How is war depicted in movies? Is it glamorized, criticized, or satirized? When are movies used as propaganda and when are they used as a tool for soul searching. Do the films influence the decision makers in Washington D.C.? Each generation tackles these and many other pertinent questions of what it means for their country to go to war. In the course "War in Film", students will study Hollywood's depiction of war by viewing essential and groundbreaking films from Hollywood's greatest directors including Stanley Kubrick, Steven Spielberg, Francis Ford Coppola, and Kathryn Bigelow. ***This course fulfills one third of the Creative Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12 by written permission.***

## Filmmaking (F)

Open to: Grades 9-12

In this course, students will have the opportunity to be their own directors, cinematographers, and producers, creating original works and telling myriad stories via the camera. They explore such genres as documentaries, commercials, music videos, and short films and learn the basic principles of how composition, camera angles, lighting, and sound create mood and tone. By using Adobe Premiere Pro, students will be able to edit their assignments into the final product that they envisioned. They will learn about scheduling a film shoot and all of the requirements that go along with that such as gathering talent, scouting locations, etc. At the end of the term, each student will have created their own five-minute film. This course is open to students with all levels of experience.

## American Comedy: A History in Film, Radio and Television (S)

Open to: Grades 9-12

Ever wonder why *The Office* makes you laugh? Will it still be funny to you in twenty years? Is comedy universal or is it generational? Are the Marx Brothers still funny? Would Stephen Colbert make people laugh in the 1950s? In this course, we will examine and analyze the progression of comedy in American entertainment for the last 100 years from vaudeville to *Tik Tok*. Students will explore in detail how and why certain comedy was considered funny to their audiences by putting them into their historical contexts. We will examine the politically and socially groundbreaking work of Lenny Bruce, Mort Sahl, George Carlin, and Richard Pryor and how comedy challenged censorship and our First Amendment rights, going all the way to the Supreme Court. At the end of the term, students will be able to clearly understand the role comedy has played in shaping American culture.

***This course fulfills one third of the Creative Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12 by written permission.***

## ENGLISH

### THE PHILOSOPHY

In our English classes, we cultivate students' creativity, empathy and personal and intellectual growth through extensive reading, writing, listening, and speaking. At the same time, we strive to develop students' appreciation of and skill with the English language. All of this begins with the close examination of literature—the artful expressions of our language which touch on the universal questions of the human condition. In a natural circle, this study of literature helps students' writing, while their writing deepens their appreciation of literature and life. We promote personal growth through deep thinking about moral and ethical questions raised in reading and explored in discussion and writing. We pursue a way of critical thinking more than a set of moral answers, pushing students to develop their own independent beliefs. Similarly, we pursue students' individual writing processes, rather than strict writing formulas, preparing them to formulate creative questions and conceptual frameworks as they approach increasingly challenging material.

To promote further independence, we provide students with a variety of teaching styles and writing expectations, balancing this with common goals for our work with the language and literature. To encourage wider perspectives, we study diverse texts from various cultures and eras. In sum, we hope to instill a love of words and books and effective expression, and the depth of thinking and feeling that one experiences in this lifelong pursuit.

## THE OBJECTIVES

The department will provide opportunities for students to:

- develop study skills, including strategies for reading, note-taking, and annotation of digital and print materials.
- practice close reading in a variety of literary genres and written and visual digital and print media.
- sharpen critical and analytical skills with sophisticated literature.
- enhance skills of oral and visual expression through presentations and online and classroom discussion.
- experiment with crafting fiction, poetry, creative nonfiction and multimedia.
- write literary essays and formulate a thesis from evidence in a text; acquire composing skills from sentence to paragraph to essay.
- write and rewrite extensively to develop a mature writing style and to build confidence in their own writing process.
- master the fundamentals and terminology of English grammar through class lessons and IXL software.
- enrich vocabulary.

## THE PROGRAM

The English program builds incrementally through yearlong courses until the senior year, when students select from a rich offering of diverse electives. English I-V, grades 6-10, include common reading and writing experiences at each level that are built upon in each succeeding year. In grade 11, students may select American Literature and Composition (with embedded honors option) or Advanced Topics in English: Civil Discourse in American Literature and Culture. In grade 12, students may take either the yearlong Advanced Topics in Literature: Critical Lenses course or trimester courses in literature and writing. Derryfield students are required to take a full year of English courses every year (or three trimesters at the senior year).

### **English IV: Change Agents (Year Long)**

Open to: Grade 9

Daily reading, discussion, and writing to interpret texts are the heart of English IV. Through individual study, feedback, creativity, and collaboration, this course moves ninth graders into deeper levels of interpretive reading and writing. Students practice writing analytical paragraphs and essays, poetry, personal reflections and narratives, and short fiction. We challenge students to develop flexibility in their writing process and control over structure and mechanics through frequent analytical responses, multimedia projects and presentations. We emphasize active reading of challenging texts and require students to take responsive notes while reading. Our texts may include *Being Heumann*; *Fahrenheit 451*; *True Grit*; *Henry IV Part 1*; *Born a Crime*; *The Poet X*; *House on Mango Street*. Students will also study poems and read independently chosen novels, short fiction, and view films. Through interacting with a diverse body of work, students will seek to understand what it means for individuals and ourselves to become change agents. In addition, students will begin to develop basic research skills that include identifying a problem, formulating research questions, conducting research analysis, and presenting findings to a public audience. Through individual reading and shared inquiry, we push students to make meaning of texts and the world around them. To help them in this process, students practice integrating SAT vocabulary into their working vocabularies and recognizing the grammatical underpinnings of their own powerful sentences.

### **Honors English IV: Change Agents (Year Long)**

Open to: Grade 9

The honors option is designed for students who possess an intellectual curiosity and a strong desire to engage in perspective taking around a variety of high level discussions. Students applying should be excellent collaborators and fluent readers and writers with the ability to make inferences and contribute daily to class discussions. We will grapple with the same themes of becoming change agents. In addition, students may also read additional texts such as *Antigone*, *The Crucible*, *True Grit*, and short stories to complement larger units of study. This fast paced class is an option for students who possess a passion to read and write and who are looking for the opportunity to discuss key course concepts in high level seminars. In addition, students will continue to build their vocabularies and expand their knowledge of grammar to create effective written work. Lastly, this course will culminate with a self-reflective project asking students to synthesize major themes from multiple sources and present their findings in a medium of their choosing.

### **English V: The World's Stories (Year Long)**

Open to: Grade 10

Tenth grade English invites students to explore the richness and complexity of human experience and cultural interaction through global literature. With the goal of seeking differing perspectives and identifying common threads, students read texts such as *Things Fall Apart*, *Persepolis*, *1984*, *The Tempest*, and a variety of international poetry and short stories. Students are encouraged to participate actively in a seminar classroom, and to develop their thinking, speaking, and writing skills in response to literature. The course concentrates on the writing process as students write analytical and creative pieces as well as personal narratives. Students do extensive work on revision and editing, supported by targeted weekly grammar and vocabulary study. Students will be asked to read closely, to develop meaningful interpretation through cultural and historical connections, comparisons between texts, and personal experience. A capstone project for tenth-grade English is the creation of the “This Sophomore Life” podcast: using individual personal essays as the building blocks, students work in teams to develop a thematically-linked audio narrative.

### **Honors English V: The World's Stories (Year Long)**

Open to: Grade 10

The honors option is designed for students who possess an intellectual curiosity and a strong desire to engage in perspective taking around global views. Students applying should be excellent collaborators and fluent readers and writers with the ability to make inferences and contribute daily to seminar style discussions. Through reading and studying world literature, students will grapple with the same themes of culture, independence, and connectedness, and reading selections will mirror some of the same texts that are read in English V. In addition, students may also read *Brave New World*, *The Handmaid's Tale*, *Purple Hibiscus*, and *The White Tiger*. This fast-paced class is an option for students who are passionate about reading and writing and who are looking for the opportunity to discuss key course concepts in high level seminars. Writing assignments will include complex analytical essays asking students to explore themes and shared ideas across texts in addition to culminating projects around culture and identity. In addition, students will continue to build their vocabularies and expand their knowledge of grammar to create effective written work. Finally, the year will end with the capstone project for tenth grade English—the creation of the “This Sophomore Life” podcast: using individual personal essays as the building blocks, students work in teams to develop a thematically-linked audio narrative.

### **Advanced Topics English: Exploring Effective Civil Discourse in American Literature and Culture (Year Long)**

Open to: Grade 11

In this course, students will explore critical moments in history when the country was polarized over issues such as race, gender and class, in order to define and explore what makes for effective civil discourse. Students will

focus, among other topics, on the Civil War and the national conversation on race as well as the emergence of the New Woman and later waves of feminism as lenses into our national debate on freedom. Students will examine moments when an exchange of text, art, and/or action--such as a speech, a protest, a novel, a film, or other media-- shifted our understanding, our actions, the law, or even the tide of the culture. Students will ask what is civil discourse and why are some media more effective in a given time than others? In addition to studying historical models, stories, and poems, students will also analyze current events and create their own modes of civil discourse, practicing effective communication that can inform, persuade, illuminate, entertain and transform. Writing in the course will emphasize fine tuning the art of rhetorical analysis, as well as practicing various narrative modes throughout the year. The year will conclude with a student-driven research paper and a final multimedia project.

Literature may include: *In Our Own Words: Extraordinary Speeches of the American Century* (Torricelli, Carroll); *The Narrative of the Life of Frederick Douglass* (Douglass); *The Awakening* (Chopin); *The Underground Railroad* (Whitehead); *The Great Gatsby* (Fitzgerald); *A Room of One's Own* (Woolf); *Just Mercy* (Stevenson); *Dissent: The History of an American Idea* (Young); poetry and contemporary short stories.

### **American Literature and Composition (Embedded Honors Option) (Year Long)**

Open to: Grade 11

What does it mean to be American and to represent America? What are the social and cultural forces that shape American identity? In this course, students investigate through critical reading, engagement with, and discussion of a variety of texts the ways in which America and American culture has been expressed, represented, and evolved since the birth of the republic to the present day. We will consider if and how these texts delineate an idea of a “traditional” or normative American, and then how subsequent texts respond to and challenge this idea of a “traditional American.” Through the representations of a diverse array of American identities in an assortment of texts that progress historically from post-colonial short fiction and non-fiction essays to 19th century *Transcendentalists* (Emerson, Douglass, Hawthorne, Thoreau), Fitzgerald’s *The Great Gatsby*, and eventually post-modern and contemporary texts, students will investigate how an array of social forces have influenced the way these authors and artists have represented America and Americans. Together we will question if the very idea of America and American culture creates a counter-traditional American to the normative, often dominant culture initially expressed by texts from the early republic.

Alongside our exploration of the cornerstone texts that have represented America, students will explore and develop their own representation of America through a series of writings. Through studying several different modes of writing, including personal narration, argumentation, analysis, memoir, creative nonfiction, and digital storytelling, students will then have the opportunity to experiment with these forms, writing to discover their writing process, their ideas about American cultural identity, and their own distinct voice. By year’s end, students will have built the skills, confidence, and independence to read and write critically, while also continuing to develop a mastery of vocabulary, grammar, an economy of style, and their own unique writing voices through frequent drafting, deep revision, and careful editing of their vocabulary. The embedded honors options focuses more deeply on the course essential questions and requires students to read additional texts, write additional analytical responses, lead class lessons, and participate in additional seminar discussions.

### **Advanced Topics English: Literature through Critical Lenses (Year Long)**

Open to: Grade 12

Advanced Topics in Literature invites students to take a deep dive into the exploration of literature, ranging from the ancient Greek tragedy to the twenty-first century. This course will offer students the opportunity to spend the year reading novels, plays, poems, and short stories from a broad range of authors, genres, and cultural settings.

Potential texts may include *Medea*, *King Lear*, *A Doll House*, *Jane Eyre*, *Beloved*, *Mrs. Dalloway*, *Angels in America*, *White Teeth*, *Long Live the Tribe of Fatherless Girls*, and *All the Pretty Horses*. Each term, students will explore thematic ideas along with the zeitgeist of an age. Through additional readings in philosophy and psychology, students will develop familiarity with theoretical terms and concepts and employ them to understand the tension reflected in the works studied. Students will examine how a diverse array of thinkers have attempted to answer questions around gender, race, family, loyalty, and ultimately, the self, and we will consider how the specifics of geography, politics, ethnicity, language, gender, economics, and other factors combine to create compelling stories.

The essential questions that will guide the scope of the course are: How does literary form create meaning? How are the social and historical values of a time period reflected in a work? How can students create a personal writing style through effective use of rhetoric? And what diverse ideas exist around texts with regard to literary criticism? This course will emphasize sophisticated analytical writing and speaking skills, and students will focus on understanding and presenting on authorial craft and technique. Guided by our coursework and following their own intellectual pull, students will engage in a year-long project investigating a writer or thematic concept; students will take a deep dive into this exploratory element, eventually creating a digital anthology including art, music, their own critical writing, and scholarly work.

### **Humanities Seminar I: Finding Truth in Good and Evil (Embedded Honors Option) (F)**

Open to: Grades 11 & 12

The fall term in Humanities Seminar seeks to answer the following questions: How can we determine what is true or right in our lives? How do the differences in understandings of truth, good and evil influence the way people act? Are “good” and “evil” relative terms? Using the philosophies of Plato, Nietzsche, Kant, Zhuang Zhou, Arendt and others, we will analyze art, music and literature to explore the views of people in different times and come to a deeper understanding of the development in understanding of these concepts. We will begin by studying the cosmologies of ancient people and how they find truth in a world they do not fully understand and chart the development in understanding through the subsequent ages. Students will use their understanding to analyze the art, music, literature and practices of different cultures to understand how they reflect ideas of good and evil. This seminar-style class will rely heavily on analysis in both projects and class discussion.

*Humanities Seminar is an interdisciplinary course that considers the intersection of history, literature, the arts and culture. Students may enroll for a single term in the fall or winter terms. The fall or winter term is a prerequisite for the spring term. This course can be taken either as a History or English credit.*

### **Humanities Seminar II: Ethics of Power (Embedded Honors Option) (W)**

Open To: Grades 11 & 12

In every sphere of life, there are those who are in positions of power over others. The winter term in Humanities Seminar will explore the ethical and philosophical theories behind power dynamics and seek to understand how to define and practice ethical leadership. We will begin our study in the Age of Enlightenment with the idea of the “social contract” and delve into the ideas of moral theory and ethics as they relate to power dynamics within the family, the government and interpersonal relationships. Using the philosophies of thinkers such as Locke, Mill, Machiavelli, Confucius, Wollstonecraft and others, students will analyze literature, art and music of different cultures to explore the basis and justification for their power structures. The course will culminate in a project in which students attempt to determine what ethical practice of power looks like by using an example of their choosing. This seminar-style class will rely heavily on analysis in both projects and class discussions.

*Humanities Seminar is an interdisciplinary course that considers the intersection of history, literature, the arts and culture. Students may enroll for a single term. Students may enroll for a single term in the fall or winter*

terms. The fall or winter term is a prerequisite for the spring term. This course can be taken either as a History or English credit.

### **Humanities Seminar III: Ancient Moderns, Modern Ancients (Embedded Honors Option) (S)**

Open To: Grades 11 & 12

Prerequisite: Either Humanities Seminar I or Humanities Seminar II

The spring term in this course will serve as a culmination of the topics covered in the fall and/or winter term. Students will be engaging in a project experience in which they examine modern literature, art, film, music, or performance and connect it to ideas presented earlier in the year. The focus for students will be to map the progression of ideas and from ancient or renaissance sources in order to explain their relevance to and impact on the modern world. Final products will be displayed in a public forum where students will engage with their peers about their experience.

*Humanities Seminar is an interdisciplinary course that considers the intersection of history, literature, the arts and culture. This course can be taken either as a History or English credit.*

### **Senior Writing Seminar (F)**

Open to: Grades 11 & 12

This trimester elective offers an ambitious and supportive environment for student-writers to hone their craft and art. Students will have the opportunity to focus on their writing skills and refine their personal craft. The class will explore the dynamic and often complex blending of genres, with an emphasis on creative nonfiction. Mechanics, style, form, and structure will also be explored. By reading the work of published writers and exploring how these types of writing are generated, the elements that characterize them, and their effectiveness, students will gain valuable insight into the overall writing process. Through guided exercises, longer writing pieces, and peer review workshops, participants will have the chance to explore and play with language and develop their own unique voices and practice skills needed to craft outstanding college application essays.

### **Humor and Horror in Literature and Film (W)**

Open to: Grades 11 & 12

The writer Stephen King explains our attraction to horror as “lifting a trap door in the civilized forebrain and throwing a basket of raw meat to the hungry alligators swimming around in that subterranean river beneath.” While horror may allow us to safely explore the darker side of the human psyche, humorous writing and satire provide a way to address fraught social issues in a lighter, less threatening way. In this course, we will examine the role that the genres of horror and humor play in the world of literature and film and in our psyche. In what ways do these texts comment on society? Why does the gothic arise in certain times? What deep-seated human fears do they stem from? How do they provide catharsis, and how are horror and comedy intertwined? Texts may include selected Grimm’s fairy tales, essays by Freud, short stories by Stephen King, Edgar Allen Poe, and David Sedaris; the novels *The Picture of Dorian Gray* by Oscar Wilde, *The Importance of Being Earnest* by Oscar Wilde, and *Where’d You Go Bernadette* by Maria Semple; and the films *Get Out* by Jordan Peele and *Dr. Jekyll and Mr. Hyde* by Rouben Mamoulian.

### **Creative Writing (S)**

Open to: Grades 11 & 12

This exciting and ambitious course will examine the craft and technique of creative writing. Students will have the opportunity to explore fiction and poetry. Through in-class exercises, journaling, and longer pieces, students will work to find and hone their own unique voices. They will heighten their imaginative sense of seeing, structure, and narrative movement. Readings of both traditional and modern authors will supplement discussions

of form and technique, and students will participate in several workshops throughout the term. The course will conclude with a final self-designed project of substantial length.

### **Public Speaking (F, W, S)**

Open to: Grades 9-12

At some point or another, we are all called upon to speak in public, be it a commencement speech, speaking at an assembly, a business presentation, or a toast at a wedding. This course is designed to help those students seeking to improve their skill at speaking before a live audience by focusing on the techniques of voice and body control (breathing, intonation, volume, articulation, gesture, posture) that will give them the self confidence to deliver a successful speech. Students will learn the various forms of public speaking: informative, demonstrative, persuasive, and extemporaneous speeches, as well as learning the necessary skills for one-on-one and team debating. They will examine famous historical speeches and TED talks to decipher what makes a speech successful. Students will experience writing original speeches and presenting them in a public forum. ***This course fulfills one third of the Creative Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12 by written permission.***

### **The Composition of Film (F, W, S)**

Open to: Grades 9-12

Storytelling has been the lifeblood of civilization. The rules for telling those stories, however, changed forever with the advent of moving pictures. Students will look at the advancement in American filmmaking by viewing, analyzing, and critiquing some of the most important films that changed the techniques of how movies are made from such esteemed directors as Charlie Chaplin, Orson Welles, John Ford, Alfred Hitchcock and Martin Scorsese to the present day directors such as Kathryn Bigelow, Greta Gerwig, Spike Lee, and Jordan Peele. They will analyze how film narratives have changed as people of color and women have become major voices in Hollywood. ***This course fulfills one third of the Creative Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12 by written permission.***

### **American Comedy: A History in Film, Radio and Television (S)**

Open to: Grades 9-12

Ever wonder why *The Office* makes you laugh? Will it still be funny to you in twenty years? Is comedy universal or is it generational? Are the Marx Brothers still funny? Would Stephen Colbert make people laugh in the 1950s? In this course, we will examine and analyze the progression of comedy in American entertainment for the last 100 years from vaudeville to *Tik Tok*. Students will explore in detail how and why certain comedy was considered funny to their audiences by putting them into their historical contexts. We will examine the politically and socially groundbreaking work of Lenny Bruce, Mort Sahl, George Carlin, and Richard Pryor and how comedy challenged censorship and our First Amendment rights, going all the way to the Supreme Court. At the end of the term, students will be able to clearly understand the role comedy has played in shaping American culture. ***This course fulfills one third of the Creative Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12 by written permission.***

## **HISTORY**

### ***THE PHILOSOPHY***

Knowledge of the past provides students the essential foundation for democratic participation and global citizenship in a rapidly changing and interrelated world. Our students graduate with a strong grasp of both US

and global history, and the ability to learn independently and see issues from a variety of perspectives, which leads to a clearer understanding of the present. While the core skills of analytical reading, writing, debating, and researching are consistently taught, creativity and flexibility in the classroom are also hallmarks of Derryfield’s history department. All of these skills combine to enhance individual learning and to develop within each student a love for historical inquiry.

### *THE OBJECTIVES*

The department will provide opportunities for students to:

- navigate and analyze unfamiliar historical texts and other relevant sources.
- evaluate scholarly and primary sources’ different points of view based on argument, evidence, etc.
- demonstrate understanding of ideological, historical and/or ethical frameworks and their impact on their own and others’ points of view.
- use evidence related to physical and human geography to support arguments related to the structure of human societies and events of the past.
- use skills of comparative analysis to compare cases across time and place.
- make historical arguments about the significance of events focusing both on causality and change over time.
- identify and use various explanatory approaches of historical method (i.e. the “great man” theory, social history, dialectical materialism, classical liberalism, etc).

### *THE PROGRAM*

#### **Histories of Modern Asia and Africa: Confronting Imperialism (Year Long)**

Open to: Grade 9

This course introduces students to the modern political and cultural history of countries grappling with the legacy of imperialism in Asia and Africa. Using primary and secondary sources, students examine China since 1793, Belgian imperialism in the Congo and its aftermath, South Africa’s struggle against apartheid, and the Middle East since the Sykes–Picot Agreement. The core purpose of the course is to examine how specific states grappled with decolonization and sought to build new political and economic systems amid competing ideological viewpoints. Day to day, the class consists of Socratic discussions revolving around artwork, music, and films to provide extra insight into the experiences of individuals, ordinary and extraordinary. This course provides a strong foundation for thesis-driven writing, note-taking, presentation, and research tools that students will utilize over the next three years and into college.

#### **History of Europe: Riots, Revolution, and Reforms (Year Long)**

Open to: Grade 10

European History from the 17th through the 20th centuries is a story of riots, revolutions, and reforms, exposing the foundational ideas and aspirations that define our contemporary lives. The broad social history of those decades, from the beginnings of Enlightenment thought in the 17th century to the implosion of the extravagant Soviet authoritarian experiment in 1991, tracks the pressures and opportunities that Europeans experienced in the process of modernization. This course asks students to consider what it was like to mount the Parisian barricades in 1789, survive in the trenches in 1915, experience the Russian Revolution, witness the Holocaust, and be on the Berlin Wall during the collapse of communism. This exploration engages close readings of primary and secondary sources as well as literature, often including works such as Primo Levi’s *Survival at Auschwitz* and George Orwell’s *Animal Farm*, encouraging students to apply their historical understanding to the analysis

of such works. Students will emerge with an understanding of the ways in which political thought and upheaval not only defined the historical landscape, but also the lives of those in the contemporary period.

### **History of Latin America: Riots, Revolutions, Reforms (Year Long)**

Open to: Grade 10

The history of Latin American and the Caribbean from the 17th through the 20th centuries is a story of riots, revolutions, and reforms driven by foundational ideas and aspirations that continue to define our contemporary lives. In this course, we will examine how the broad social history of those decades is impacted by colonial conquest inspired by Enlightenment ideals of the 17th century—and how the liberated peoples of nations such as Haiti, Mexico, Cuba and Argentina confront those ideals. We will ask how the legacies of the deeply fractured political regimes that came after the revolutionary rupture of these societies continue to be felt today in the ongoing quest for national identity and unity. This course invites students to: consider what led the brilliant Toussaint Louverture to achieve the most successful slave revolt in history, to witness the Mexican Revolution unfold as the first revolution to be caught on film in 1910, and to examine the divergence in political agendas after independence in Cuba and Argentina. This exploration engages close readings of primary and secondary sources including historical images, political cartoons, music, artwork, film, poetry, and excerpts from *The Black Jacobins* by C.L.R. James, *The Underdogs* by Mariano Azuela, and *Cuba: My Revolution* by Inverna Lockpez, encouraging students to apply their historical understanding to the analysis of such works. Students will emerge with an understanding of the ways in which political thought and upheaval not only defined the historical landscape but also the lives of those in the contemporary period.

### **United States History (Year Long)**

Open to: Grades 11 & 12

This study of United States history asks students to consider the ways that Americans are shaped by their past and the ways that we shape our understanding of it. Students use books, letters, photographs, songs, film, television and everything in between to study contrasting views from historians and historical participants and draw their own conclusions. The class is designed to encourage student interaction, and students are asked to take sides and defend their opinions on significant historical questions as they make connections across the long term of American history. The course introduces students to the varieties of historical argument as well as the different kinds of evidence that can underpin them. Students will consider important debates on issues ranging from the radicalism of the American Revolution to the effectiveness and origins of the New Deal. In the process, students develop key skills in effective reading, analytical writing and substantive discussion.

### **Advanced Topics History: American Public History (Year Long)**

Open to: Grades 11 & 12

This course is designed around the notion that history matters to Americans today. Students will explore the ways that Americans make their memories of American history and how those memories shape views of contemporary issues in American life. In this course, students will come to understand the story of American History, but will also become historians as they dive into seven particular debates that have puzzled the best historical minds. Students will interrogate the complex arguments made by professional historians before evaluating the merits of those arguments by investigating the sources and evidence used by those historians. As students develop conclusions about these contentious issues in the American past, they will consider how the public remembers these issues and how they should be remembered. Students will shape historical memory as they develop public interventions related to these topics in modes ranging from museum exhibit designs to web pages. This course will culminate in an individual research project as students choose one major issue

discussed throughout the year and conduct their own historical research in physical and digital archives across the country.

### **Advanced Topics History: United States History Since 1960 (Year Long)**

Open to: Grade 12

Prerequisite: Completion of US History or AT American Public History

Open only to seniors, US History Since 1960 offers the academic rigor of a college course. It enables students to recognize that recent American history—like historical scholarship at large—doesn't offer a neat list of "historical lessons" so much as it imparts greater caution about the country's challenges in the present. The complexity of recent American life, students learn, defies partisan summation even as the political climate has grown vastly more dogmatic. As a result, students come to appreciate that the ultimate fate of the American Republic remains undecided—there is no certain Hegelian curve towards progress; the world's greatest modern experiment in democratic governance can still fail. Topics include U.S. foreign policy from the Cold War through the War on Terror; the American presidency since John F. Kennedy; and social movements such as the African American battle for civil rights and second wave feminism. The course is reading and writing intensive and culminates in a larger class project designed to "make historical nuance go viral" in the contemporary media.

### **International Relations I: Bargaining and War in the World System (Embedded Honors Option) (F)**

Open to: Grades 11 & 12

In the Fall Term, students explore theoretical foundations in the discipline of Security Studies, and will test that theory to explore contemporary issues from the conflict over Kashmir to the North Korean nuclear program. This course will consider war in human history as the result of failure in bargaining between states over issues ranging from territory to political ideology. By investigating how and why the breakdown of bargaining between states leads to war, students will acquire the tools of international relations analysis and the opportunity to use them in historical and contemporary inquiry. The Honors Option in this course will focus on the economic impact of war both on the belligerents and on third parties. ***This course will be offered during alternating academic years beginning in 2022-2023.***

### **International Relations II: Human Rights and International Law (Embedded Honors Option) (W)**

Open to: Grades 11 & 12

In the Winter Term, students will consider the pressing human rights concerns facing the world today. Students will begin the term by exploring the history of Human Rights as a concept from the French Revolution to the United Nations Universal Declaration of Human Rights. Students will then move to consider a series of case studies of the development of international law related to issues ranging from the 1994 Rwandan Genocide to the 2015 European Migrant Crisis. This course is intended both to help students wrestle with the difficult questions posed by the idea of universal human rights and to develop an understanding of the use of both customary and treaty law in the international system. The Honors Option in this course focuses on the rights of women under international law and considers how to promote the rights of women in light of threats such as lack of access to the ballot, forced marriage, honor killings and others. ***This course will be offered during alternating academic years beginning in 2022-2023.***

### **International Relations III: Cold War, Nuclear Peace? (Embedded Honors Option) (S)**

Open to: Grades 11 & 12

In the Spring Term, students will examine the proliferation of nuclear weapons since 1945 and the concept of "Nuclear Peace." In general, students will be interested in discovering whether nuclear weapons are indeed a tool that promotes relative peace because of their deterrent nature or if nuclear weapons present a threat to

world peace. Students will begin their study of nuclear weapons with a careful examination of the bipolar system of the Cold War and the logic of Mutually Assured Destruction before turning their attention to attempts at disarmament at the end of the Cold War and the proliferation of nuclear weapons in the hands of both states and nonstate actors in the present. The Honors Option in this course focuses on the representation of nuclear power and nuclear weapons in the popular imagination through film, television and literature. ***This course will be offered during alternating academic years beginning in 2022-2023.***

### **World Politics I: Terrorism in the Contemporary World (Embedded Honors Option) (F)**

Open to: Grades 11 & 12

Students will spend the Fall Term considering the role of terrorism in the world today. Students will consider the motivations that cause young people of their own age to join terrorist groups around the world and then consider the social, ethical and practical questions raised by the different approaches states take to combat terror. This course will begin with a focus on the history of terrorism and the evolution of the threat before turning attention to various options available to respond to that threat including economic, social, law enforcement and military responses. The goal of the course is to allow students to evaluate the different responses and consider how a state can or should prioritize various responses. The Honors Option for this course focuses on the threat of domestic terrorism in the United States. ***Generally, this course is offered as a second history course to Juniors. This course will be offered during alternating academic years beginning in 2023-2024.***

### **World Politics II: Development, Sustainability and Inequality (Embedded Honors Option) (W)**

Open to: Grades 11 & 12

During the Winter Term, Students will tackle the question: how can a billion people move out of poverty without irreversibly harming the natural world upon which human life depends? Focusing on the threat of climate change in the Global South, students will encounter key ideas and debates surrounding the topics of foreign aid, social entrepreneurship, and the role of government in addressing global poverty while keeping average warming below 2°C. Each student will follow a particular country in the Global South throughout the term as they learn about the economic, security, environmental and human rights issues that this country faces in the context of global institutions such as the World Bank, the International Monetary Fund and the United Nations. Students will consider the legacies of colonialism and the future of the developing world as they consider the best ways to lift the world further out of poverty while combating Climate Change. The Honors Option for this course focuses on other environmental challenges such as threats to biodiversity and access to clean water. ***Generally, this course is offered as a second history course to Juniors. This course will be offered during alternating academic years beginning in 2023-2024.***

### **World Politics III: Gender Equality on the World Stage (Embedded Honors Option) (S)**

Open to: Grades 11 & 12

A famous political dictum from China holds that “women hold up half the sky,” but women remain underrepresented in positions of power across the globe. Students will spend the Spring Term focused on the experiences of women in the 21st century world. They will investigate human rights concerns related to gender/sex, develop an understanding of the role of women in development and compare women’s access to political power at the state level across the world. Students will ask how international and domestic policy can or should be shaped to address the particular concerns of women. This course will conclude with a simulated meeting of the UN Commission on the Status of Women, which will make recommendations for improving the position of women in global governance. The Honors Option in this course will focus on the rights of LGBTQ+

women. **Generally, this course is offered as a second history course to Juniors. This course will be offered during alternating academic years beginning in 2023-2024.**

### **Humanities Seminar I: Finding Truth in Good and Evil (Embedded Honors Option) (F)**

Open to: Grades 11 & 12

The fall term in Humanities Seminar seeks to answer the following questions: How can we determine what is true or right in our lives? How do the differences in understandings of truth, good and evil influence the way people act? Are “good” and “evil” relative terms? Using the philosophies of Plato, Nietzsche, Kant, Zhuang Zhou, Arendt and others, we will analyze art, music and literature to explore the views of people in different times and come to a deeper understanding of the development in understanding of these concepts. We will begin by studying the cosmologies of ancient people and how they find truth in a world they do not fully understand and chart the development in understanding through the subsequent ages. Students will use their understanding to analyze the art, music, literature and practices of different cultures to understand how they reflect ideas of good and evil. This seminar-style class will rely heavily on analysis in both projects and class discussion. **Humanities Seminar is an interdisciplinary course that considers the intersection of history, literature, the arts and culture. This course may be applied to History or English departmental graduation requirements.**

### **Humanities Seminar II: Ethics of Power (Embedded Honors Option) (W)**

Open to: Grades 11 & 12

In every sphere of life, there are those who are in positions of power over others. The winter term in Humanities Seminar will explore the ethical and philosophical theories behind power dynamics and seek to understand how to define and practice ethical leadership. We will begin our study in the Age of Enlightenment with the idea of the “social contract” and delve into the ideas of moral theory and ethics as they relate to power dynamics within the family, the government and interpersonal relationships. Using the philosophies of thinkers such as Locke, Mill, Machiavelli, Confucius, Wollstonecraft and others, students will analyze literature, art and music of different cultures to explore the basis and justification for historical power structures. The course will culminate in a project in which students attempt to determine what ethical practice of power looks like by using an example of their choosing. This seminar-style class will rely heavily on analysis in both projects and class discussions. **Humanities Seminar is an interdisciplinary course that considers the intersection of history, literature, the arts and culture. This course may be applied to History or English departmental graduation requirements.**

### **Humanities Seminar III: Ancient Moderns, Modern Ancients (Embedded Honors Option) (S)**

Open to: Grades 11 & 12

Prerequisite: Either Humanities Seminar I or Humanities Seminar II

The spring term in this course will serve as a culmination of the topics covered in the fall and/or winter term. Students will be engaging in a project experience in which they examine modern literature, art, film, music, or performance and connect it to ideas presented earlier in the year. The focus for students will be to map the progression of ideas from ancient or renaissance sources in order to explain their relevance to and impact on the modern world. Final products will be displayed in a public forum where students will engage with their peers about their experience. **Humanities Seminar is an interdisciplinary course that considers the intersection of history, literature, the arts and culture. This course may be applied to History or English departmental graduation requirements.**

## **MATHEMATICS**

## *THE PHILOSOPHY*

The primary concern of the Mathematics Department is the development of a student's ability to think logically and rationally. Regardless of interest, this reasoning is invaluable in nearly any chosen field, as well as in everyday living. We also believe students benefit from a deep understanding of mathematical proofs, facts and concepts, and that logical reasoning provides the path to that understanding. While students need to master some mechanical processes and algorithms to succeed in mathematics, they are encouraged and guided to explore and discover patterns, abstractions, connections, and problem solving strategies that can also be applied to real-world problems. Our program provides students with flexibility to find courses that provide appropriate challenge for their individual capacity.

## *THE OBJECTIVES*

The department will provide opportunities for students to:

- understand mathematics as a logical system.
- have a knowledge of, and be competent with basic mathematical processes and concepts.
- develop efficiency and accuracy in computation.
- acquire the ability to solve problems.
- use logical thinking to discover both generalizations and applications.
- develop the skills and vocabulary essential to future mathematical study.
- develop creativity and curiosity.
- understand the relationship between mathematics and the other academic disciplines.
- understand and appreciate the role of mathematics in society.

## *THE PROGRAM*

Below are the topics covered in each of the mathematics courses offered at Derryfield. The ability of a particular class may dictate some variance from the outline, but would involve only slight changes. A student must complete at least three full years of Mathematics in the Upper School and progress at least through Algebra II in order to graduate. Most students are encouraged to study mathematics for all four years and, based on their interests, continue to take one or more of the advanced math courses offered beyond Algebra II.

### **Advanced Algebra (Year Long)**

Prerequisite: Pre-Algebra equivalent and/or Middle School geometry, Mathematics Department Approval

This course begins with a brief refresh of pre-algebra skills, including the order of operations, operations with fractions, negative numbers, and solving simple equations. Advanced Algebra is designed to provide students with a foundation for their progression through the remainder of the Mathematics Curriculum.

Topics of study will include:

- Introduction to variables
- Real number axioms
- Linear equations and inequalities in one and two variables
- Graphing in the plane
- Operations with polynomials
- Factoring
- Laws of exponents including negative exponents
- Rational expressions
- Linear and quadratic functions
- Irrational numbers
- Quadratic formula

### **Geometry (Year Long)**

Prerequisite: Algebra I or equivalent

The Geometry course is designed to support the students' transition from concrete to abstract reasoning. Students review the building blocks of geometry and apply geometric and algebraic properties through hands-on, inquiry-based, and proof-based activities. Students master properties of two and three-dimensional figures through study of advanced measurement, construction, and comparison. Students practice their reasoning skills as they solve problems involving spatial relationships, area, volume, and coordinate geometry. They extend their study of similarity and proportion as they deepen their understanding of the Pythagorean Theorem, the special triangles, and right triangle trigonometry.

Topics of study will include:

- Angles in the plane
- Parallel and perpendicular relationships
- Congruent triangles
- Quadrilaterals and regular polygons
- Similar triangles
- Special triangles
- Circles and angles in circles
- Constructions and loci
- Coordinate geometry
- Areas of polygons and circles
- Deductive proof and applications to three dimensions emphasized throughout
- Trigonometry of right triangles
- Laws of sines and cosines

### **Algebra II (Year Long)**

Prerequisite: Algebra I and Geometry or equivalent

The philosophy behind Algebra II lies in tying functions to their graphs to widen student's perspectives from pinpointing specific values of functions to the wider relationships and trends represented by graphing including such concepts as asymptotes, end behavior, and continuity.

Topics of study will include:

- Linear equation and inequalities in 1, 2, and 3 variables
- Linear systems
- Quadratic equations and functions
- Irrational numbers and radical expressions and equations
- Complex numbers
- Techniques for solving polynomial equations
- Exponential and Logarithmic functions, equations, and properties
- Rational expressions and equations including negative exponents

### **Honors Algebra II (Year Long)**

Prerequisite: Geometry

This course begins with a quick review of Algebra I, moves to linear functions, and rapidly progresses through the Algebra II curriculum. It is designed for motivated students who are ready to work through material at a quick pace in preparation for advanced mathematics offerings. Group work is a major component of the course and students are expected to take significant personal responsibility for their own learning.

Topics of study will include:

- Foundations from Algebra I
- Linear Functions
- The Graphs of The Basic Functions
- Systems of Linear Equations and Inequalities
- Polynomial Algebra
- Factoring
- Quadratic Functions
- Rational Functions
- Exponential Functions
- Inverse Functions
- Logarithmic Functions
- Roots and Radicals
- Conic Sections

### **Honors Algebra II & Precalculus Combined (Year Long)**

Open to: Grades 10-12

Prerequisite: Geometry or Advanced Algebra

Open to tenth graders and higher, this combined course covers the topics of both the Algebra II and Precalculus courses in a single school year. It is designed for motivated students who are ready to work through material rapidly in preparation for advanced mathematics offerings. Group work is a major component of the course and students are expected to take significant personal responsibility for their own learning.

Topics of study will include:

- Prerequisites & Quadratic Functions
- Basic Parent Functions
- Rational Expressions
- Exponential Functions
- Inverse Functions
- Logarithmic Functions
- Equations and Inequalities

- The Unit Circle
- Sinusoids
- Trigonometric Identities and Equations
- Law of Sines and Cosines
- Polar Coordinates
- Parametric Equations
- Vectors
- Sequences, Probability and Counting Theory
- Polynomials

### **Precalculus (Year Long)**

Prerequisites: Algebra II

In this course, we will explore a variety of topics that reinforce prior mathematical skills and understanding, and prepare students for more advanced mathematics courses, calculus in particular. For an appetizer, we begin with some review of algebra and the function concept, including equation solving and function composition. The main course of the meal is trigonometry, as we advance from triangular trigonometry to circular trigonometry. We enjoy dessert towards the end of the year with some discrete mathematics, probability, and an exploration of conic sections.

The emphasis throughout is using the exercise and reinforcement of mechanical skills to achieve deeper understanding of the connections to other parts of mathematics and other fields of study. Rote learning and memorization is not the goal, but success in this course requires practice and preparation.

Topics of study will include:

- Functional analysis including composition and inversion
- Polynomials with factor theorem and rational roots theorem
- Review of exponential and logarithmic functions
- Trigonometric functions and their inverses
- Solving equations involving trigonometric functions
- Trigonometric identities and proofs
- Solving triangles using the Laws of Sine and Cosine
- Sequences and series
- Probability and combinatorics
- Conic sections

### **Honors Precalculus (Year Long)**

Prerequisites: Honors Algebra II

Honors Precalculus will cover the same topics as the Precalculus course but it will cover the material in greater depth, at a faster pace, and at a greater level of abstraction. Additional topics like polar coordinates and polynomial theorems will be covered to enhance the depth and rigor of study. Honors Precalculus is a fast-paced course intended for highly motivated students who have demonstrated an enthusiasm for math. The expectations and workload placed on the students are much higher than in Precalculus. This higher expectation of work, quality, and depth of ideas will directly challenge students' conceptual understanding of higher-level mathematics.

Topics of study will include:

- Transformations of functions
- Composition of functions
- Inverse functions
- Polynomial and rational functions
- Exponential and logarithmic functions
- Trigonometric functions
- Analytic trigonometry
- Combinatorics and probability
- Sequences and series
- Conic sections
- Matrices

### **Calculus (Year Long)**

Prerequisite: Precalculus

This course provides students with an intuitive approach to the fundamentals of differential and integral calculus. Focusing on functions, students explore limits, leading to the definition of derivative. The concepts of average and instantaneous rates of change are investigated. We develop the rules of differentiation, including the chain rule and implicit differentiation, and apply them to problems in optimization, related rates, and curve sketching. We introduce the concepts of finding area under a curve, the integral regarded as the antiderivative, and the Fundamental Theorem of Calculus. Applications of integration are included.

Topics of study will include:

- Limits and continuity
- Derivatives including the chain rule and implicit differentiation
- Applications in curve tracing, related rates, and optimization problems
- Integration including area approximation and the substitution method
- The fundamental theorems of calculus
- Analytic and graphical solutions of simple differential equations (if time allows)

***It is important to note that Calculus does not create a pathway to Advanced Topics: Calculus; after completing this course, students may advance to Honors Calculus, Statistics, Software Design with Java, or AT Investment Math.***

### **Honors Calculus (Year Long)**

Prerequisite: Precalculus

Honors Calculus offers a rigorous study of differential and integral calculus at a college level. Success in Calculus is highly dependent on strong mechanical skills with algebra and trigonometry. That said, our goal in mastering these skills is to go beyond and recognize deeper patterns and abstractions relating to rates of change. This course is a prerequisite to Advanced Topics Calculus.

Topics of study will include:

- Limits and continuity
- Limit definition of the derivative
- Derivatives of algebraic and trigonometric functions
- Chain rule, implicit differentiation
- Applications in curve sketching, related rates, and max-min problems
- Continuity and the mean value theorem
- Approximating areas with rectangles or trapezoids

- Integration and Riemann sums
- The fundamental theorems of calculus
- Calculus of circular functions, exponential and logarithmic functions

### **Advanced Topics Mathematics: Calculus (Year Long)**

Prerequisite: Honors Calculus

What skills, habits of mind, and experiences are needed to be an effective mathematician in the 21st century? How can theory, application and modern technology help us answer this question? In this advanced topics calculus course we will develop a framework for advanced theoretical understanding and application of calculus, and how to apply calculus in fields of study such as engineering, physics, biology, and economics.

Topics of study will include:

- Volumes of revolution and of a known base
- Improper integrals
- Conic sections and the general second degree equation
- Calculus of parametric, polar, and vector functions
- L'Hôpital's rule and its application to convergence of improper integrals and sequences
- Integration by parts and partial fractions
- Application of integrals to area, volume, length of curve, and surface area
- Analytic solution of variable separable and logistic differential equations
- Solution of differential equations graphically by slope fields and numerically by Euler's method
- Infinite series of numbers; tests of convergence
- Power series, Maclaurin and Taylor series with Lagrange remainder

### **Statistics (Embedded Honors Option) (Year Long)**

Prerequisite: Precalculus

This course includes three major areas of emphasis: data collection, data description, and data analysis as described below.

Topics of study will include:

- One-variable statistics: measures of central tendency and variability
- Graphs—histogram, box plot, dotplot, normal quantile plot
- Two-variable statistics—measures of linearity and transformation to linear graphs
- Scatterplot, residual plot
- Surveys
- Comparative experiments
- Probability and probability distributions, including binomial and geometric distributions
- Normal density curves
- Sampling distributions and the Central Limit Theorem
- Hypothesis tests and confidence intervals for means and proportions
- Chi-squared analysis of categorical data
- Inference on slope of a regression line
- Power of a test, Type I and Type II errors

### **Advanced Topics Mathematics: Investment Math (Year Long)**

Prerequisite: Prerequisite: Precalculus and a Windows Operating System or Apple computer with Bootcamp and Windows installed.

This seminar style course will begin with an exploration of the broader capital markets and an examination of the fundamental principles of investing (time value of money, efficient market hypothesis, risk vs. return, supply/demand dynamics, market cycles, etc.). The focus will then shift to the technical analysis of single security price data as an ideal application of precalculus and other mathematics. Students will be responsible for analyzing a specific stock over the course of the term using the tools developed in the class. Throughout the course, there will be an emphasis on relating current events to the financial markets. The class will explore the power of TradeStation's software (see hardware requirements below). We will learn about some of the many different functionalities that TradeStation offers, and we will apply these functionalities to different price series. We will begin to develop our first strategy by optimizing parameters of basic analysis techniques learned in the fall. We will apply an advanced statistical Walk Forward Analysis to review our results. Then we will learn how to code using EasyLanguage. We will then develop hypotheses about what drives the markets and use our ability to code to write algorithmic trading programs that try to capture gains from these observations. We will backtest our programs and evaluate their performance. We will then learn about how to manage a portfolio through the application of many different non-correlated algorithms. ***This course is cross-listed with the STEM X Department. Required: Windows Based computer or Apple computer with Bootcamp and Windows installed. Chromebook or Tablet/iPad are not acceptable.***

#### **STEM X Electives** (for math credit)

In some cases, when a student has completed the three credits of math required in grades 9-12, the math department may recommend that a student take a STEM X course as their math credit. The math department believes that, in these cases, the problem solving, design thinking, and critical analysis involved in the STEM courses is a valuable extension of their math study.

#### **STEM X: Airfoils and Wind Turbines (F)**

#### **STEM X: Gliders (W)**

#### **STEM X: Laminate Process and Application in Wind Energy (S)**

#### **STEM X: Legacy and Independent Projects (Year Long)**

### **SCIENCE**

#### *THE PHILOSOPHY*

Science education for our students provides them with science process skills, scientific concepts, and the resources necessary for the development of scientific literacy. The curriculum uses an inquiry-based approach appropriate for the developmental level of upper school students. The purpose of the curriculum is to encourage and develop an appreciation of science and the enjoyment of learning.

#### *THE OBJECTIVES*

The department will give students the opportunity to:

- use science concepts, process skills, and values in making everyday decisions.
- understand that the generation of scientific knowledge depends upon the inquiry process and the ability to propose hypotheses.
- distinguish between scientific evidence and personal opinion.
- identify the relationship between data and interpretation.
- recognize the limitations as well as the usefulness of science and technology.
- recognize the human origin of science and understand that scientific knowledge is subject to change as evidence accumulates.
- gain sufficient knowledge and experience to appreciate the scientific work carried out by others.
- gain a richer and more exciting view of the world as a result of their science education.
- inquire and increase scientific knowledge throughout life.

## *THE PROGRAM*

### **Biology (Year Long)**

Open To: Grades 9 & 10

Biology increases the student's awareness of the relationships between scientific thought, current knowledge in biology, and everyday living. In addition, there is an emphasis on helping students become biologically literate through thoughtful experimental design and skill development for reading primary literature. Topics covered include evolution, ecology, basic biological chemistry, cell structure and function, metabolism, inheritance, molecular genetics, and systems of the human body. This course covers many topics at the surface level to give students an overview of diverse themes in biology and to offer exposure to a range of fields which could be pursued further in the future. A variety of assessments including laboratory investigations, projects, papers, quizzes, and debates assist students in understanding the major concepts being covered.

### **Honors Biology (Year Long)**

Open To: Grades 9 & 10

Honors Biology provides students with a strong biological foundation in scientific principles that will guide future decisions. This course takes a deeper dive than Biology into biological concepts as they apply to all forms of life. Topics covered include evolution, basic biochemistry, cell structure and function, the cell cycle, energy processing through cellular respiration and photosynthesis, and information processing through DNA, RNA, and protein synthesis. Through a variety of exercises, including laboratory investigations, oral and written projects, and summative assessments, students will incorporate the scientific approach to question concepts and solve problems. Success in this course will be evaluated, in part, by the extent that students apply what they know to solve new problems.

### **Chemistry (Year Long)**

Open To: Grades 10 & 11

Chemistry introduces students to the relationships between the composition and structure of matter and the ways in which matter behaves. Students develop competency in and knowledge of the language of chemistry, the use of the periodic table, the properties of common substances, and the pattern and process of chemical reactions. The course emphasizes understanding reactions both theoretically as well as through classroom demonstrations and student laboratory work.

### **Honors Chemistry (Year Long)**

Open To: Grades 10 & 11

Honors Chemistry covers similar topics as Chemistry, but explores the material in greater depth, both conceptually and mathematically. Additional topics of study include solution chemistry, properties of gasses, equilibrium systems, and acids and bases. The course emphasizes understanding reactions both theoretically as well as through classroom demonstrations and student laboratory work. Students complete one project each term that develops a deeper understanding of a specific aspect of chemistry: the periodic table, properties of compounds, and water quality.

### **STEM X Electives** (for science credit)

Open to: Grades 9-12

These courses can be taken for Science credit. Please see the STEM X section of the guide for a complete description.

### **STEM X: Airfoils and Wind Turbines (F)**

### **STEM X: Gliders (W)**

### **STEM X: Laminate Process and Application in Wind Energy (S)**

### **STEM X: Legacy and Independent Projects (Year Long)**

### **Physics (Year Long)**

Open to: Grades 11 & 12

Prerequisite: Current enrollment in Algebra II or higher

Physics studies the interaction of forces and energy in our everyday lives, focusing on the topics of mechanics, electrostatics, electric circuits, and magnetism. In the fall and winter, students learn to describe the motion of an object, and then apply Newton's laws of motion and conservation of energy to the situation. In the spring, students explore the interaction between electric and magnetic fields and forces. Laboratory experiments and projects play a significant role in helping students develop their understanding of each concept. While mathematical relationships are used throughout the course, phenomena are described conceptually to balance the impact of the mathematical component of the class.

### **Honors Physics (Year Long)**

Open to: Grades 11 & 12 (Grade 10 by permission of the Science Department)

Prerequisite: Current enrollment in Precalculus or higher

Honors Physics covers the same topics as Physics, but does so in greater depth, both conceptually and mathematically. Honors Physics also explores additional topics such as rotational motion and magnetic induction. Laboratory experiments play a significant role in helping students develop their understanding of each concept. This in-depth course is designed for highly motivated students who have demonstrated an enthusiasm for science. From homework assignments to laboratory experiments, students in Honors Physics are expected to solve more complex questions and problems. This higher expectation of work quality and depth of ideas directly challenges students' conceptual understanding and mathematical skills. The focus of the course is to develop critical thinking and problem solving skills through experimentation and project based learning environments.

### **Environmental Science (Embedded Honors option)**

Open to: Grades 11 & 12

Prerequisites: Biology and Chemistry

This course is an interdisciplinary, lab-based study of earth's systems and the human impact and experience within them. Topics bridge several branches of science (physical, life, social, and earth sciences), including historical perspectives as well as current innovations and solutions to environmental issues. Students are asked to collect and interpret scientific data, and to think and produce work through historical, cultural, and scientific lenses. A primary objective of this course is for students to develop the ability to investigate complex and relevant topics from scientific, historical, and cultural perspectives, and to effectively communicate for a variety of audiences and purposes. Honors students are expected to complete additional projects, presenting their findings to the class.

**Environmental Science: Sustainability, Water Access and Pollution (F)**

**Environmental Science: Climate and Energy (W)**

**Environmental Science: Population, Food and Land Management (S)**

**Human Anatomy and Physiology (Embedded Honors option) (Year Long)**

Open to: Grades 11 & 12

Prerequisites: Biology and Chemistry

In this course, students learn about the human body, its vital functions, and the organ systems that support those functions through multiple case studies, hands-on activities, and their personal connection to the content of the course. We all have a body and should understand what's under the hood, how it works, how to take care of it, and what puts the organism in jeopardy. Students work toward fluency in the language of anatomy and physiology and apply principles from biology and chemistry as they navigate through topics such as nutrition and the digestive system, exercise physiology and performance, illnesses and injuries, and how each human organism shares an interconnectedness with the human population, the environment, and the universe beyond. The course uses multimedia resources to provide visual aids to help students see inside the body. Students have the opportunity to have hands-on experiences dissecting anatomical structures such as a sheep brain and heart, and a cattle femur. Honors students are expected to demonstrate deeper and more detailed understanding of each topic on assessments, and to meet additional expectations on projects.

**Advanced Topics Science: Biology (Year Long)**

Open To; Grades 11 & 12

Prerequisites: Biology and Chemistry

The Advanced Topics Biology course is a capstone course for the biology curriculum at Derryfield. This course is comparable to a first-year biology course at the college level. This course is open to all students who did high quality work in Biology and Chemistry (honors and non-honors), and have outstanding motivation and interest in biology and the field of science. Successful students in this class will be those who have developed responsibility for their own learning.

As part of the biotechnology lab skills component of AT Biology, students complete a series of industry-relevant lab investigations ranging in complexity from DNA extraction to gene editing of bacteria using CRISPR technology. This section of the course is approximately 75% lab based, with the remainder spent discussing concepts, techniques, and ethics related to the use of biotechnology. Throughout the course, students learn to decode technical language in primary scientific literature. In the immunology and microbiology portion of this course, students gain a basic understanding of immune cell types and a range of pathogens. Students participate in many group projects utilizing creative as well as scientific approaches to diseases. Specifically, students investigate functions of monoclonal antibodies and develop a novel therapeutic approach for this

technology. They present their final idea to a group of PhD scientists in addition to their peers and other Derryfield teachers.

### **Advanced Topics Science: Chemistry (Year Long)**

Open To; Grades 11 & 12

Prerequisites: Biology and Chemistry

The Advanced Topics Chemistry course is a capstone course for the chemistry curriculum at Derryfield. The course is open to all students who did high quality work in Chemistry or Honors Chemistry and have outstanding motivation and interest in chemistry or the field of science. Successful students in this class will be those who have developed responsibility for their own learning as well as a curiosity and drive to understand deeper and more subtle chemical questions. AT Chemistry covers selected topics with greater depth and detail, both conceptually and mathematically, including stoichiometry, nuclear chemistry, reaction kinetics, equilibrium, acid/base chemistry, electrochemistry, and thermochemistry. Laboratory experiences are similar to those in a first-year college course. In the winter term, students take a deep dive into a specific aspect of nuclear chemistry, interviewing experts in the field and creating a podcast to educate the public.

### **Advanced Topics Science: Physics (Year Long)**

Open To; Grades 11 & 12

Prerequisites: Physics, current enrollment in Honors Calculus

The Advanced Topics Physics course is a capstone course for the physics curriculum at Derryfield. The course builds on material covered in the Honors Physics and Physics courses by introducing calculus solutions to previous topics. The course focuses on mechanics, electricity and magnetism, and then moves onto other topics like thermodynamics and fluid mechanics. AT Physics utilizes open-ended laboratory experiments and real-life application projects to help students master the course material in a variety of learning environments and display their knowledge in creative and exciting mediums.

## **STEM X**

### *THE PROGRAM*

These interdisciplinary courses immerse students in design thinking and project based learning experiences that allow them to explore their interests as they relate to the various strands of Science, Technology, Engineering and Mathematics. Students learn how to envision, plan, and execute engineering projects informed by outside research and using techniques and data produced in class. Each trimester course will give students ample opportunities to learn through doing – manipulating foam and balsa wood to test airfoils in our wind tunnel (Fall), constructing basic measurement devices (thermometer, pressure gauge, and piston) for physical chemistry (Winter), and scaling up the wind turbine project from the fall to test outdoors (Spring). Individual projects will include building models, disassembling and reconstructing professional-grade exemplars, and matching each exploration to appropriate testing apparatuses. Group projects will allow students to specialize in an area of study that they wish to develop, allowing more complex designs to be executed.

### **STEM X: Airfoils and Wind Turbines (F)**

Open to: Grades 9-12

In this term, students are given two briefs: Optimize lift at low wind speeds, and build a wind turbine which maximizes power in this regime. The test bed is our wind tunnel, which is itself the focus of projects in other

STEM courses. Students tackle the challenge using supplied materials (foams, balsa wood, 3D printer), and invent other processes as their interests and skills direct (clay, laminates).

### **STEM X: Gliders (W)**

Open to: Grades 9-12

In this term, students build on their work in the previous term by constructing gliders. Their challenge is, given a basic set of materials, to design a fuselage and wing conformation that will maximize the distance their glider will travel. The test bed is a gravity-powered launcher which allows students to experiment launch angle as an additional controlled variable. The final product is a report including what techniques worked, which avenues were yet unexplored, and which goals were selected.

### **STEM X: Laminate Process and Application in Wind Energy (S)**

Open to: Grades 9-12

In this term, students will draw on what they learned in the first term to scale up a wind turbine from 12 inch cross sections to much larger cross sections. The brief is three-fold: Design and build a male mold for laying-up a fiberglass wind turbine blade; lay-up and build that fiberglass wind turbine; deploy that turbine in the real world and measure its performance at low wind speed. Collaborative teams will be four to six students. In the process, we will learn about 3D planning, the art of fiberglass, integration of static and dynamic elements through power transmission (ball bearings), and, finally, how to measure and quantify power output versus wind speed.

### **STEM X: Legacy and Independent Projects (Year Long)**

Open to: Grades 9-12

Projects offer the opportunity for strong, highly motivated students to design and undertake their own interdisciplinary projects under the guidance of Mr. Pankratz, or participate in one of several legacy endeavors. Students will work independently on their projects and regularly exchange ideas, resources and updates. Students will walk through the design process for their project: brainstorm, proposal, research summary, detailed plan, and regular progress reports. Interested students should see Mr. Pankratz for more information.

### **Computer Science Lab: Sections 1, 2, 3 (F, W, S)**

#### **CS Lab Section 1: Introduction to Web Development (F, W, S)**

Open to: Grades 9-12

In this section of the CS Lab STEM X course, students learn how to create and stylize web pages using HTML and CSS. Students also have the opportunity to create interactive web applications using Javascript. This course is taught in a hands-on, laboratory format. Students begin the term by building small example web pages. Students then progress to designing and building their own custom website or application. The goal of this class is for the students to learn in a fun, non-intimidating way through self-paced, student-driven projects. If you've ever wanted to build your own beautifully stylized website, then this course is for you!

#### **CS Lab Section 2: Programming with the Arduino (F, W, S)**

Open to: Grades 9-12

In this section of the CS Lab STEM X course, students learn how to build electronic circuits and control them using the popular Arduino microcontroller. Students learn about electricity and how to build useful systems that use sensors, motors, LEDs, buzzers, and touchscreens. Students also learn basic programming concepts and learn how to control electromechanical systems using an Arduino controller. This course is taught in a hands-on, laboratory format. Students begin the term by building example circuits and systems. Students then progress to

designing and building their own custom invention. The goal of this class is for the students to learn in a fun, non-intimidating way through self-paced, student-driven projects. If you've ever wanted to create the next must-have electronic gadget, then this course is for you!

### **CS Lab Section 3: Mobile App Development (F, W, S)**

Open to: Grades 9-12

In this section of the CS Lab STEM X course, students learn to write mobile applications using the MIT App Inventor programming tool. Students learn basic programming concepts while they create fun, multimedia games and applications for an Android tablet or mobile phone. Students learn about event driven programming, and they get practical experience in app design and development. This course is taught in a hands-on, laboratory format. Students begin the term by building instructive, example Android applications. Students then progress to designing and building their own custom application. If you've ever wanted to write the next viral app, then this course is for you!

### **Computer Science Practice and Principles**

Required for: Grade 10

This exposure course is designed to give all sophomores an introduction to the principles of computer programming and the impact that computational technologies have on modern society. We will work in the Python programming language and learn basic control structures, object manipulation, and get introduced to data structures. We will also consider other topics such as cryptography and security, big data, digital humanism, virtual/alternate reality and artificial intelligence. Students will be able to transfer and apply the knowledge from this course to make better informed decisions about how to leverage technology using interdisciplinary approaches. Computer Science Practice and Principles also serves as a gateway to future coding and STEM courses. This course is graded pass/fail.

### **Software Design with Java (Year Long)**

Open to: Grades 9-12

This course offers an extensive introduction to computer programming and software design using the Java programming language. There are no prerequisites for this course, but some understanding of basic programming structures, such as the coding topics learned in Computer Science Practice and Principles, or the Computer Science Lab courses, would be helpful. This course begins with the basic syntax of Java, including variables and types, simple commands, program flow and decision statements, and iterative looping structures. We then proceed to arrays and array lists, interfaces and polymorphism, inheritance hierarchies, recursion, analysis of algorithms, sorting and searching. While we learn the particulars of Java, we focus on more broad-based language and design concepts that apply to different higher languages. ***A laptop running Windows, Linux, or MacOS is required.***

### **Advanced Topics Computer Science: Software Design with Java (Year Long)**

Open to: Grades 11 & 12

Prerequisites: Permission from the teacher

Embedded in Introduction to Software Design with Java, this course allows students with a stronger background in computer science to learn the Java programming language. The AT students in the class will also work independently on an exploration of Theoretical Computer Science, using the textbook *Introduction to the Theory of Computation* by Michael Sipser. This is a high-level and mathematically challenging exploration of automata, regular expressions, context-free grammars, Turing machines, the halting problem, and the P=NP problem. No specific prior knowledge is required and the required mathematical techniques will be introduced, but some

programming experience and mathematical maturity are highly desired. Students who have previously taken the non-AT version of this class will focus more on the Theoretical Computer Science topic. This course will require meeting times in addition to the regularly scheduled blocks. ***A laptop running Windows, Linux, or MacOS is required.***

### **Advanced Topics Mathematics: Investment Math (Year Long)**

Prerequisite: Precalculus

This seminar style course will begin with an exploration of the broader capital markets and an examination of the fundamental principles of investing (time value of money, efficient market hypothesis, risk vs. return, supply/demand dynamics, market cycles, etc.). The focus will then shift to the technical analysis of single security price data as an ideal application of precalculus and other mathematics. The class will analyze data and fit the data with regression curves as well as employ probability to develop tools to determine investment buy and sell decisions. Students will be responsible for analyzing a specific stock over the course of the term using the tools developed in the class. Throughout the course, there will be an emphasis on relating current events to the financial markets. Building upon the technical analysis done in the fall term, this class will explore the power of TradeStation's software. We will learn about some of the many different functionalities that TradeStation offers, and we will apply these functionalities to different price series. We will begin to develop our first strategy by optimizing parameters of basic analysis techniques learned in the fall. We will apply an advanced statistical Walk Forward Analysis to review our results. Then we will learn how to code using EasyLanguage. In the spring, we will develop hypotheses about what drives the markets. We will use our ability to code to write an algorithmic trading program that tries to capture gains from these observations. We will backtest our programs and evaluate their performance. We will use filters to try to improve performance, and we will continue to improve our programming skills. We will incubate these algorithms and see how they perform on real time data. We will then learn about how to manage a portfolio through the application of many different non-correlated algorithms. ***This course is cross-listed with Math.***

## **WORLD LANGUAGE**

### *THE PHILOSOPHY*

The purpose of the World Language Department is to guide students as they develop the skills necessary to communicate and to interact effectively and empathetically in an increasingly interconnected world. The study of language develops the student's ability to compare and connect his or her own way of life to the global community. We encourage our language students to use their linguistic skills and cultural knowledge beyond the classroom. The World Language Department believes that the study of other languages and cultures is a vital part of a student's secondary-school education.

## *THE OBJECTIVES*

Guided by the philosophy and guidelines for language learning in the 21st Century of the American Council of Teachers of Foreign Language [ACTFL], we focus on student engagement and construction of understanding through critical-thinking, creative collaboration, and communication in the target language.

The department will give students the opportunity to:

- acquire language using multiple modes (interpersonal, presentational, interpretive) to communicate effectively and creatively in more than one language in a variety of situations and for multiple purposes [Communication].
- develop insight into the nature of language and culture in order to foster meaningful connections and to interact respectfully with other people [Cultural Awareness].
- communicate and interact with citizens of the world with cultural competence in order to participate in multilingual communities globally [Communities and Global Citizenship].
- connect with other disciplines and cultural experiences while honoring diverse perspectives and using the language to contribute in academic and career-related situations [Connections].
- investigate, explain, and reflect on the linguistic structure of language through comparisons of the native and the studied language(s) [Linguistic Comparison].

## *THE PROGRAM*

### **Latin I (Year Long)**

Open to: Grades 9-12

Latin I introduces students to the world of the ancient Romans and their language. The course covers the fundamentals of the Latin language by studying its grammar, morphology, and pronunciation with the goal of translating appropriately leveled Latin readings. In their translations and supplementary readings, students study aspects of Roman daily life with a focus on the town of Pompeii and its well-preserved ruins. Class activities include practice through Latin readings, reading and pronouncing Latin words, and occasionally Latin composition. Ongoing discussions and creative projects, such as the "Escape from Pompeii" project, engage students with various aspects of Roman daily life. As English and other western languages are in large part derived from Latin, students will use their study of Latin to learn how modern languages function.

### **Latin II (Year Long)**

Open to: Grades 9-12

Prerequisite: Latin I

In Latin II students begin with a thorough review of the grammar covered in Latin I. From this point, students will seek mastery in more difficult grammatical constructions and vocabulary through increasingly complex readings and Latin composition. Through Latin readings about Roman expansion and related cultural shifts, students continue to analyze grammar and acquire vocabulary. Students further develop their research skills as they study this year's thematic focus on Roman power in the ancient world and demonstrate their knowledge through presentations and projects on language and history, such as the Roman Republic military project. The course will continue to present linguistic concepts through Latin that will enhance their knowledge of the English language and other romance languages, and continue to offer students opportunities to reflect on the connections between the ancient past and modern world.

### **Latin III (Year Long)**

Open to: Grades 9-12

Prerequisite: Latin II

In Latin III students conclude their study of Latin grammar and move on to reading unadapted Latin written by Roman authors. The course begins with a thorough review of grammar covered in previous years and moves into studying more complex, nuanced topics that are centered around Roman government in its structure and practice. Students will encounter Latin texts from Roman authors such as Cicero, Caesar, Ovid, Catullus, and Vergil. During class, students translate, analyze themes in their readings, and use a variety of modes to expand their vocabulary. In addition to class activities, students give presentations to their classmates on Latin grammar and engage in projects such as the Roman author project where they research the background and style of an author and present a passage to the class.

### **Honors Latin III (Year Long)**

Open to: Grades 9-12

Prerequisite: Latin II

This fast-paced course is designed for students who wish to delve into a deeper level and encounter material at a faster pace than Latin III. Students in Honors Latin III finish the whole of Latin grammar sooner than in Latin III and move on to spend more time reading unadapted texts written by Roman authors. Students will encounter Latin texts from Roman authors such as Cicero, Caesar, Ovid, Catullus and Vergil. Students will also be introduced to metered Latin poetry and learn how to read and scan dactylic hexameter. In class students will translate, analyze themes in their readings, and use a variety of modes to expand their vocabulary. The historical focus for this year is learning about the Roman government in its structure and practice. In addition to class activities, students engage with projects such as the Roman author project and Cicero composition project in order to engage with the background and style of these authors.

### **Latin IV/V (Year Long)**

Open to: Grades 9-12

Prerequisite: Latin III or Latin IV

A combined class, this two-year sequence deepens students' understanding of both the language and culture of ancient Rome while exploring the themes of war and memory, the costs of colonialism & empire, and othering of foreigners. Students read passages from Vergil's *Aeneid* and Julius Caesar's *de bello Gallico* in alternating years. While reading these texts, students analyze writing styles and parse difficult grammar and syntax. In addition to language work, students explore the Roman world through papers, presentations, and projects, such as the Caesar-style ethnographic commentary and the personal *Aeneid* shield, leadership portrait, and more.

### **Advanced Topics Latin: Survey of Roman Prose Authors (Year Long)**

Open to: Grades 11 & 12

Prerequisites: Honors Latin III, Latin III or Latin IV

In this capstone course, students read important works of Latin prose, or works not written in meter, from several genres with an emphasis on both translation and interpretation. The course begins with historical works by Caesar, moves to the oratory of Cicero, delves into the more difficult biographies of Suetonius and history by Tacitus or others, and finishes with a unit chosen by the students. Discussion of the Roman political sphere pervades this course. While reading these authors and delving into the cultural ramifications and historical context for political decisions, students explore the background and style of each author through projects, which may include research for a reacting to the past style game or a composition unit, where they are expected to write in the style of each author. ***The two Advanced Topic courses in Latin are offered in alternating years. This course will be offered in 2022-23.***

### **Advanced Topics Latin: Poetry in the Golden Age of Rome (Year Long)**

Open to: Grades 11 & 12

Prerequisites: Honors Latin III, Latin III or Latin IV

In this capstone course students explore the world of Latin poetry during the fall of the Roman Republic and into the early empire period. Readings are selected from a variety of Roman poets from the period from the late Republic to the early Empire. Authors may include Vergil, Catullus, Ovid, Lucretius, and others. In combination with the main Latin readings, the students explore elements of style in metered Latin poetry from Roman sources such as Cicero and Quintilian. Our units include ancient philosophy, female voices in Roman poetry and a choice unit where students choose the author or genre. Students in classwork and projects engage with modern scholarship in order to connect with the most recent work in classics. The course culminates in a project where students rewrite the story of Orpheus and Eurydice where they rewrite the myth in meter. ***The two Advanced Topic courses in Latin are offered in alternating years. This course will be offered in 2023-24.***

### **Spanish I (Year Long)**

Open to: Grades 9-12

Learning Spanish not only benefits the brain of the student, it can broaden the worldview of the learners. In Spanish I, students gain basic vocabulary and grammar scaffolded in six thematic units and varied interactive activities to be able to read, write, listen, and speak in the target language. Through adapted cultural readings, short videos, music, and audios, students discover traditions, customs and history of some of the Hispanic cultures and communities in the U.S. and abroad. Students compose oral presentations, simulate numerous interpersonal situations, and solve many interpretive challenges. Activities include students creating videos in Spanish to introduce themselves and their classes and writing original comic strips using the verb *estar*.

### **Spanish II (Year Long)**

Open to: Grades 9-12

Prerequisite: Spanish I

Building upon students' learning in Spanish I, this course introduces more thematic vocabulary, idiomatic expressions, and past tense verb conjugations. Units include new vocabulary to discuss daily routines, food, holidays, technology and our homes. Students also expand their knowledge of geography, history and cultures of the Spanish-speaking world through videos and short readings about Chile, Guatemala, Peru and more. Activities, games and homework target students' abilities to read and write in Spanish with an increasing emphasis on listening comprehension and ability to speak Spanish, as the year progresses. Students frequently collaborate in-class with peers to perform short skits or presentations in Spanish. Students may work on some larger group projects such as the "Cuento para niños" assessment, which asks students to write and illustrate a children's book in Spanish. The course is conducted primarily in the target language, with English used as a comparative reference model or to clarify more complex concepts. Students are expected to participate daily in Spanish with a focus on a broader vocabulary and improved pronunciation.

### **Spanish III (Year Long)**

Open to: Grades 9-12

Prerequisite: Spanish II

Spanish III is an intermediate-level course designed to build upon students' learning from Spanish I & II through thematic units that include a multitude of verb forms, including the subjunctive mood. These grammar structures equip students with the ability to communicate more effectively in the target language. Vocabulary units include new terms to discuss the natural world, life in the city, well-being, creative arts and current events. Activities, games and homework place greater emphasis on written Spanish than in previous years, as students at this

level possess more complex grammar to express themselves. Compositions often demand students to make cultural and historical comparisons while also employing creative writing. Students may also work collaboratively on creative projects, such as using new vocabulary to draft and present an initiative to make the Derryfield School more green. Listening comprehension is heavily emphasized, as the class is taught almost exclusively in the target language, and students are presented with more recordings and videos in Spanish. Students are expected to participate daily in Spanish with a strong emphasis on more complex communication and expression.

### **Honors Spanish III (Year Long)**

Open to: Grades 9-12

Prerequisites: Spanish II and recommendation of teacher and department chair

In Honors Spanish III, students integrate vocabulary and complex syntax at an accelerated pace and strive to speak in the target language as an authentic means of connecting communities. In this honors, intermediate-level course, students build upon their learning from Spanish I & II through thematic units that include a multitude of verb forms, including the subjunctive mood. Through a variety of texts (short story, advertising, journalistic, etc.) that reflect the cultural, social, and linguistic diversity of the Hispanic societies, students advance their interpersonal, interpretive, and presentational skills and discover some diversity of perspectives within contemporary Spanish-speaking cultures. Students write several types of texts to use different rhetorical devices and ways of using the target language including an in-class essay about the story "La abuelita y el puente de oro." Topics may include environmentalism, literature, music, cities, health, family, art, and politics.

### **Spanish IV (Year Long)**

Open to: Grades 9-12

Prerequisites: Spanish III, Honors Spanish III or recommendation of teacher and department chair

In Spanish IV, students continue to hone their communication and writing skills in this course which is aimed at expanding students' vocabulary and grasp of advanced grammatical structures and at improving overall fluency. Students learn and work with thematic vocabulary which is embedded in cultural and literary readings as well as in authentic short films from Spain and Latin America. The themes of this course include personal relationships, pastimes, daily life, health and wellbeing, travel, and nature. This class is conducted almost exclusively in Spanish and the students are expected to speak only in Spanish. Activities include writing original odes, researching and presenting health and well being topics, and creating and performing skits in the target language.

### **Spanish V (Year Long)**

Open to: Grades 9-12

Prerequisites: Spanish IV or recommendation of teacher and department chair

Spanish V is designed for Spanish students who want to continue their studies of advanced grammar topics and to improve their reading and writing skills through literature, film and current events. Students continue to study complex grammar topics including the preterite vs. the imperfect and the subjunctive and indicative moods. Students read and analyze short stories by Gabriel García Márquez, Isabel Allende, Jorge Luis Borges, and Julio Cortázar and also read several chapters of Miguel de Cervantes' famous novel, *El ingenioso hidalgo don Quijote de la Mancha*. Students submit literary analyses and investigate and present current events from the Spanish-speaking world. This course is taught in Spanish and students are expected to discuss and write only in Spanish as well. Activities include writing a modern *Quijote-like* adventure and a school president speech and

formally analyzing readings through written essays. Students also watch authentic short films and videoclips based on our readings.

### **AT Spanish: The Pursuit of Social Justice and Equality in the Spanish-speaking World (Year Long)**

Open to: Grades 11 & 12

Prerequisites: Recommendation of teacher and department chair, typically after Honors Spanish III, Spanish IV or another AT Spanish course

Advanced Topics Spanish students develop and strengthen their linguistic and analytical skills in Spanish through examining authentic poetry, prose, plays, film, and other media sources. This AT Spanish course explores emerging voices and themes centering on the fight against social injustice and the pursuit of equal rights for all, especially for the disempowered. Some titles include poetry by Alfonsina Storni, Julia de Burgos and Sor Juana Inés de la Cruz, *La vida de Lazarillo de Tormes y de sus fortunas y adversidades* by an anonymous author, *San Manuel Bueno, mártir* by Miguel de Unamuno, and the documentary film, *El silencio de otros* by Spanish directors, Almudena Carracedo and Robert Bahar. Students reflect and present through creative and analytical writings, skits, debates, journal entries, interactive presentations, poetry recitations, and podcasts. Students continue to study and be tested on advanced grammar units. This course is taught exclusively in Spanish and students are expected to discuss and write only in Spanish. ***The two Advanced Topic courses in Spanish are offered in alternating years. This course will be offered in 2022-23.***

### **AT Spanish: Language and Culture through Literature and Media (Year Long)**

Open to: Grades 11 & 12

Prerequisites: Recommendation of teacher and department chair, typically after Honors Spanish III, Spanish IV or another AT Spanish course

This course is designed for advanced Spanish students interested in attaining fluency in Spanish by exploring major contemporary and historical themes and perspectives from the Spanish-speaking world. We examine authentic sources including literature, film and other media sources such as news, podcasts, music, social media, and television programs. Some titles include medieval and modern works such as *La casa de Bernarda Alba* by Federico García Lorca, *El burlador de Sevilla* by Tirso de Molina, *El ingenioso hidalgo don Quijote de la Mancha* by Miguel de Cervantes, and films including *La lengua de las mariposas* by Spanish director, José Luis Cerda, and the documentary film, *Living on One Dollar*, by directors Chris Temple, Zach Ingrasci, Sean Leonard, Sean Kusanagi. Students work both collaboratively and independently to research, analyze, and present cultural and literary topics including their creating a non-profit organization and accompanying Google Site to address a real-world problem in the Spanish-speaking world. Proficiency in Spanish is developed and enhanced through class discussions, dialogues, debates, formal writing, and presentations as well as through intensive review of language structure, including vocabulary amplification from our readings and other course materials. Students continue to study and be tested on advanced grammar units. This course is taught exclusively in Spanish and students are expected to discuss and write only in Spanish. ***The two Advanced Topic courses in Spanish are offered in alternating years. This course will be offered in 2023-24.***

### **Online Options For Languages Not Offered At Derryfield**

Students have the option to fulfill their language graduation requirement through online learning in a language not offered at Derryfield. This option gives students the flexibility to study such languages as French, German, Japanese and Arabic. Students still must complete level three of their language in order to graduate. This option is designed for highly-motivated and passionate students. The Language Department Co-Chair and the student's academic advisor will work closely with interested students to determine if such an option is feasible for a

student, based on their academic standing and other non-academic commitments. Just as we would ask that students think of proper balance for their course loads during the course selection process, we would help the student/parents weigh the pros and cons of taking an online language program.

If students are interested in exploring this option, they should contact Mike Leary, Language Department Co-Chair, at [mleary@derryfield.org](mailto:mleary@derryfield.org). Please consider the following:

- As with all online options at Derryfield, except for Malone classes, this will be a student's sixth class.
- Students must submit a formal proposal via email to the Language Department Co-Chair by April 12 for current Derryfield students. This proposal should include the following information:
  - A 1-2 page proposal detailing their proposed plan and their rationale for taking an online course versus a course at Derryfield. This proposal should include program curricular information.
  - Materials and/or link from the online program showing its rigor, expectations, and general course outline.
  - A signed form or email from the student's parents indicating support of the proposal and a clear understanding of the graduation requirement component of the program.
- The proposal will be evaluated by the Department Co-Chair and recommended to the Division Head and Dean of Academic Program for approval.
- Derryfield acknowledges it cannot ensure that a student will have the same level of experience or success with an online provider as he or she will have with a Derryfield language course. As a result, the responsibility rests with the parents to choose a program that will serve their child and to help monitor their child's progress.
- Families will incur the cost of online tuition, sign-up, monitor progress, and address technology needs and issues.
- Except for Malone classes, which are taught twice a week during the school day, students must enroll in a language program that does not conflict with any other Derryfield commitments.
- Students/Families will be asked to provide us with a progress report/certificate/documentation/transcript at the end of each Derryfield trimester and also upon completion of their online language course by June of that academic year.
- Online language courses are listed as "Pass/Fail" on the Derryfield transcript with the grade on the back of the transcript.
- Students must finish their course by the last day of the academic year.

## **ATHLETICS**

### *THE PHILOSOPHY*

Derryfield offers a comprehensive interscholastic athletic and physical activity program on several levels. The school competes in numerous sports in both the Middle and Upper Schools during all three seasons. There are also opportunities to participate in non-team activities. While time of involvement may vary from activity to activity, the school's goal to develop mentally and physically healthy individuals does not. Our main objective is to develop in our students both skill and understanding, as well as an appreciation of maintaining an effective level of fitness. In athletics, we also seek to develop sportsmanship and team attributes such as cooperation, unity, and pride. To help meet this end, students have access to a registered nurse/wellness coordinator, school counselor, athletic trainer, and PE teacher. Services that are available to students include, but are not limited to, treatment for injuries, care for illnesses, prescription and non-prescription medication administration per the

medication policy, and counseling related to health, physical activity, and sports. The Wellness Center is open daily starting at 7:00 a.m. and provides students access to various physical fitness activities, such as cardio and strength training, volleyball, pickleball, rock climbing and open gym, throughout the day until closing at 6:00 p.m. Physical activity and athletic commitments are firm obligations and must be met as faithfully as all other school appointments.

Each upper school student is required to participate in two seasons of physical activity each year. Only one independent activity per school year is permitted. Missing a practice or a game is considered as serious as missing a class. Failure to complete the physical activity requirement will jeopardize graduation.

## *THE PROGRAM*

Derryfield offers a wide range of physical activities and interscholastic athletic competition.

Varsity teams compete in soccer, golf, basketball, alpine and Nordic skiing, swimming, baseball, tennis, crew, cross-country running, track, lacrosse, ice hockey, and field hockey. Membership on a varsity team requires a moderate level of playing ability and demands a strong commitment of time and effort including some weekends and vacation time. Tryouts are held for a place on a varsity team.

Interscholastic competition is also available at the junior varsity level in field hockey, soccer, crew, tennis, basketball, and lacrosse for less experienced students. The teams provide experience for developing athletes and an opportunity to participate for any underclassman who is willing to make the commitment.

While recognizing that providing a variety of sports and activity choices is inherent in the concept of requiring participation in two seasons of physical activity, it is not always possible that every student will be able to participate in their first choice activity. Each sport/activity does have a maximum number of participants allowed, some of which are dictated by facility restrictions. For example, only 24 girls and 24 boys will be allowed to participate in tennis, and only 14 students in golf. NHIAA golf rules allow only six players to participate in varsity matches. Due to course restrictions, an additional eight students will be able to participate as JV players. Pre-season tryouts will be held for these 14 positions in the golf program. Students should have a second choice activity in mind if, after tryouts for both Varsity and JV, the maximum numbers are reached and they are not able to participate in their first choice. Students should contact the coach of the sport in which they wish to participate as early as possible, in order to be included in initial sign-ups. If maximum numbers are not reached, then all interested students will be allowed to participate.

The School also offers non-competitive activities, which include yoga and fitness/weight training. Another option for upper school students is the Independent Physical Activity (IPA) contract, which allows students to design an activity program under the supervision of the Director of Athletics and their advisor. The IPA is designed to accommodate the student who is involved in a physical/athletic activity not offered by the school. Students wishing to pursue an IPA must submit an application for approval to the Director of Athletics. Forms are available online and in the athletic and main school offices. In addition, a trimester of community service or a music/drama commitment in a school production may be substituted for a physical activity once (each year) during a student's upper school career. Please note that a community service waiver and a musical waiver may not be used in the same year.

## Independent Physical Activity Application

Managers and scorekeepers are needed to work with the various teams. A student can complete one season of his or her athletic requirement by working conscientiously with a competitive team as a manager or scorekeeper. This option demands a season-long commitment to the team. There is an exercise component attached to this option. To apply for a manager position, students should fill out the IPA application and submit it to the Athletic Director for approval. Some sports, such as crew, golf, skiing, ice hockey, swimming, and tennis may require students to pay for some use of practice facilities. The School handles the bookkeeping and billing for these charges. Each year there is usually some used equipment (such as cleats, lacrosse gloves, field hockey/lacrosse sticks, etc.) available at a reduced price. Please see the Director of Athletics for details.