

# 2024 UPPER SCHOOL 2025 Curriculum Guide



**THE DERRYFIELD SCHOOL**



# The Derryfield School

## **UPPER SCHOOL CURRICULUM GUIDE 2024-2025**

### **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.

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## PORTRAIT OF A DERRYFIELD GRADUATE

The complete Upper School academic program is organized around the Portrait of the Derryfield Graduate represented below. These ten standards represent the outcomes of the Derryfield academic experience from sixth through twelfth grade.

<b>Belonging</b>  I take action to help both myself and others belong in any community.	<b>Civil Discourse</b>  I engage in respectful discussion and appreciate diverse perspectives with a desire to learn.	<b>Collaboration</b>  I work with others: listening, compromising, and contributing toward shared goals.	<b>Communication</b>  I use the most effective tools to share my ideas with clear purpose.	<b>Creativity</b>  I use a number of different strategies to generate new, original ideas.
<b>Critical Thinking</b>  I interpret, evaluate, and synthesize information in order to challenge my own and others' assumptions before drawing conclusions.	<b>Cultural Awareness</b>  I appreciate my unique identity and perspective as well as those of others in my local and global communities.	<b>Problem Solving</b>  I know how to break down complex, real world problems and design creative, compassionate solutions.	<b>Research</b>  I ask meaningful questions and form conclusions using credible resources.	<b>Self-Advocacy</b>  I know what helps me learn, when to ask for help, and how to find support and resources.

## 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 and a maximum of six (6) academic courses (as well as required exploration courses like LEAD and Computer Science). Once a student's schedule has been confirmed, students may request to audit a seventh course in the Arts department with permission of the Dean of Academics. Students may also audit Academic Support or Academic Advancement as a seventh class.

### Graduation Requirements

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

- English: 4 credits (including an English course during every term)
- History: 3 credits (including Histories of Modern Asia and Africa or an equivalent World History course and U.S. History or AT American Public History)

- Mathematics: 3 credits (including completing at least Algebra II with all 3 credits in the Upper School)
- World Language: 2 credits (students must successfully complete at least level three of one language; two levels of that language must be completed in the Upper School)
- Science: 3 credits (including Biology and Chemistry)
- Arts: 1 credit (three trimesters)
- Computer Science: All students must satisfactorily participate in Computer Science Practice and Principles in 9th grade or equivalent
- LEAD (Leadership, Ethics, and Development): All students must satisfactorily participate in LEAD each year including the Independent Senior Project in the senior year
- Athletics: All students must satisfactorily participate in two athletic experiences per year. Credit can be earned in a competitive team or noncompetitive sport. Once per year, a student may earn credit in an independent physical activity, or an equivalent

## **The Upper School Program of Studies**

### **Grade 9 Standard:**

- English 9 or English 9 Honors
- Advanced Algebra, Geometry, Algebra II, or Algebra II Honors
- Biology or Biology Honors
- World Language
- Histories of Modern Asia and Africa: Confronting Imperialism
- Arts electives
- Computer Science Practice and Principles (required) and other STEAM 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. Academic Foundations is available for credit for one trimester.

### **Grade 10 Standard:**

- English 10 or English 10 Honors
- Geometry, Algebra II, Algebra II Honors, Precalculus, Precalculus Honors, Calculus, AT Calculus I, or AT Calculus II
- Chemistry or Chemistry Honors
- World Language
- World History: Riots, Revolution, and Reforms
- Leadership, Ethics, and Development (LEAD)
- STEAM X electives
- Arts electives
- Academic Advancement elective

**Grade 11 Standard:**

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

**Grade 12 Standard:**

- English or Humanities electives (Embedded Honors) or AT English: Literature through Critical Lenses
- Precalculus, Precalculus Honors, Calculus, AT Calculus I, AT Statistics, Statistics, AT Calculus II, or AT Investment Math
- World Language
- Lab Science or STEAM X
- History or Humanities electives (Embedded Honors) or AT History: US Since 1960
- LEAD (Leadership, Ethics, and Development)
- Arts electives
- Academic Advancement elective

**Advanced Topics (AT) Courses**

Derryfield offers three levels of courses in the Upper School: Advanced Topics, Honors (standalone 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 PBL Works 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 have the ability to both learn independently and quickly absorb large amounts of material. Some Advanced Topic courses have specific prerequisites, but not all. The criteria for readiness for the demands of our AT courses require 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, 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 Malone classes are listed in the MSON Course Catalog 2024-25. 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 February 16, 2024.

Malone Schools Online Network Course Catalog Online will be available early February 2024.

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

During the final five weeks of the 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 Relations Manager, who serves as a liaison with alumni and the Derryfield community at large, can suggest possibilities for internships and apprenticing.

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 Mr. Induni or Ms. Barsi for further details.

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

Exploration Courses, which are offered three days 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, sportscasting, podcasting, journalism, academic competitions such as Robotics,

Model UN and Math Team, and more. Sign up for these classes occurs before the start of each term. ***These courses are graded pass/fail and do not count in the student's 5-6 academic courses.***

## UPPER SCHOOL ACADEMIC COURSE OFFERINGS

### 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 indicated cases, in all three terms.

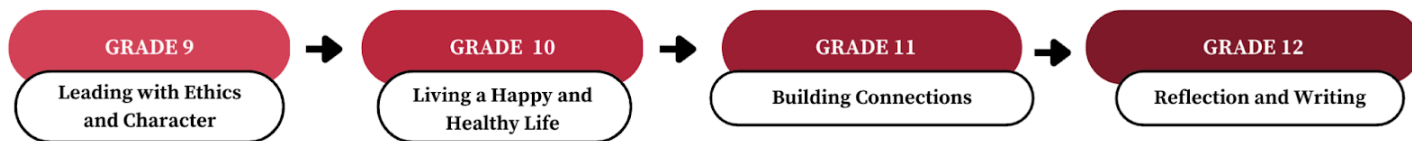
## LEADERSHIP, ETHICS, AND DEVELOPMENT (LEAD)

### THE PHILOSOPHY

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 skills that define models of leadership and the many forms that leadership takes. Students 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 Surveys, college aptitude programs, healthy relationships and Pathways. ***All students are enrolled in the appropriate LEAD course automatically each year. These courses are graded pass/fail and do not count in the student's 5-6 academic courses. Students successfully pass LEAD by understanding and engaging in class discussions and activities.***

### THE PROGRAM

The following chart depicts the overall program of study in the LEAD Program. Please refer to the substantive course descriptions that follow for full titles and details.



#### Leading with Ethics and Character

Open to: 9th Grade

In their first immersion at Derryfield, students learn introductory information related to what makes an effective and trusted leader in the 21st century. Each student completes the True Colors

and Gallup Strength Inventory surveys, and is introduced to the idea of their own role as a leader in our community. They are able to connect these experiences to potential leadership opportunities throughout their Derryfield journey. This ties into a larger exploration into community and



belonging. In addition, students learn the importance of ethical decision-making and building trust via collaboration and understanding multiple viewpoints.

### **Living a Happy and Healthy Life**

Open to: 10th Grade

Tenth grade students explore the brain-body-connection in an integrated unit on healthy lifestyle choices. This includes, but is not limited to, students taking away different coping strategies for managing stress, understanding peer to peer friendships and relationships, a re-exploration of ethical decision making, and how drugs, alcohol and peer pressure influence our ability to access the rational parts of our brain. In the spring trimester, tenth grade students will work with the college counseling office to complete a skills and interest inventory to brainstorm possible college majors and careers.

### **Building Connections**

Open to: 11th Grade

Eleventh grade students begin their LEAD journey with the College Counseling Office through an

introduction to SCOIR, the platform that students will use to apply to college. Throughout the winter and spring trimesters, they meet with the College Office to begin preparing for their college journeys.

### **Reflection and Writing**

Open to: 12th Grade

Seniors experience LEAD with the College Counseling Office in the fall trimester. The program supports students as they immerse themselves in the college process by providing time to reflect on who they have become, what is important to them, and how they can communicate their story to colleges. During LEAD meeting time, they work both independently and with a writing coach to draft, conference on and revise various parts of their college applications including essays and personal statements. Students revisit LEAD in the spring trimester prior to their ISPs through a program called LEAD Launch. LEAD Launch is a speaker series in which students are exposed to a variety of topics related to life after Derryfield.

## **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.

Students may audit Academic Support or Academic Advancement as a seventh class with permission of the Dean of Academics.

## **THE PROGRAM**

### **Academic Foundation (F)**

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. A 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 \$1,100.00. Parents or guardians who wish to sign their child up for Academic Support must fill out a request for each applicable trimester. This form can be found on the Parent Resources tab in MSA. Students are not able to attend class until this form is complete.**

### **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 \$550.00. Parents or guardians who wish to sign their child up for Academic Advancement must fill out a request for each applicable trimester. This form can be found on the Parent Resources tab in MSA. Students are not able to attend class until this form is complete.**

## **ARTS**

### **THE PHILOSOPHY**

The 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 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.

Once a student’s schedule is confirmed, students may audit a course in the Arts as a seventh class with permission of the Dean of Academics.

## **THE PROGRAM**

The following chart depicts the overall program of study in the Arts Department. Please refer to the substantive course descriptions that follow for full titles and details.



## **VISUAL ARTS**

### **Drawing: Form and Light (F, S)**

Open to: Grades 9-12

The human act of drawing predates the written word. Children express innate joy when given the chance to draw. As we age, many of us draw less and less to the point where we abandon the skill entirely. Taught concurrently with Painting Methods, this class gives students permission to re-engage the skill while framing drawing as the foundation of visual art. We will learn how to draw from observation while exploring the possibilities of graphite, charcoal, ink, and more.

### **Drawing: The Human Figure (F)**

Open to: Grades 9-12

Prerequisite: Drawing: Form and Light, Painting Methods, or with permission of the department chair upon review of student artwork.

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 Methods (F, S)**

Open to: Grades 9-12

From oil paint to watercolor, this class serves as a guided exploration of pushing paint across a surface. Taught concurrently with Drawing: Form and Light, students will begin by utilizing paint as a drawing tool, laying down values and mixing grays to create the illusion of light. From there they will engage with color theory and paint-mixing techniques for both water and oil-based mediums. Rounding out their experience, students will be given the chance to create work independently, and unlock the joys of expression through paint.

### **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 Media Lab (F, W, S)**

Open to: Grades 9-12

This course offers the opportunity for strong, highly-motivated students to design and undertake their own interdisciplinary projects under the guidance of an Arts instructor. This course is ideal for students interested in digitally-based media including graphic design, illustration, animation, 3-D sculpting, and/or game design. Students will walk through the design process for their project: brainstorm, proposal, research summary, detailed plan, and regular progress reports. ***Students may enroll in this course multiple times over their time at Derryfield with permission of the instructor.***

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

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.

## **The Art of Worldbuilding (W)**

Open to: Grades 9-12

Avatar: the Last Airbender, Lord of the Rings, Star Trek: vastly popular intellectual properties that owe much of their success to the depth and richness of their worlds. They are tangible, meaningful, and enthralling. But how are they made? In this course, students will be introduced to a myriad of processes that artists, writers, and designers use to ideate anything from a simple character to an entire cosmology. This multimedia course will have students collaborating, writing, sketching, designing, and sculpting artifacts that will help to paint a picture of a vibrant, original world.

## **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.

## **Studio Art Honors: Series and Exhibition Seminar (Year Long)**

Open to: Grades 11 & 12

Prerequisite: 2 trimesters of any visual arts course, or with permission of the department chair.

Exhibition within an art context facilitates a conversation between the maker and a viewer. Working in series allows for a longform engagement with a topic, and facilitates deep articulation of a concept. This course offers holistic guidance on the development of the student's creative practice, while also giving them multiple opportunities to forge profound connections with the public through their artwork. Starting in the fall term, students work with prompts, and

experience a structured engagement with the creative process. From inspiration to intent, then subsequent research, making, critique, and finally reflection, students will experience the life cycle of creating art at a rigorous level. In the winter, students conceptualize their own prompts, culminating into a budding series. They will arbitrate critiques and design periodic, pop-up shows so they may refine their vision. The spring trimester is oriented around revising and refining work, as well as supplementing additional pieces to develop a series to exhibit in an end-of-year show.

Essential questions include: What influences and inspires me to create? What do I have to say using visual media? What kind of material can I use to communicate my intent? How does one learn to create affective experiences through works of art? In what context should my art piece be experienced? How can I create art consistently and in a sustainable way? In addition to visual art engagement, this course will emphasize sophisticated reflective writing, and articulate oral and written feedback during peer critique.

***Students may enroll in this course multiple times over their time at Derryfield with permission of the instructor.***

## **Studio Art: Intro to Creative Practice (F)**

Open to: Grades 11 & 12

Prerequisite: 2 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. Juniors 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.

### **Studio Art: Portfolio Building Seminar (S)**

Open to: Grade 11

Prerequisite: 2 trimesters of any visual arts course, or with permission of the department chair.

This course is designed for Juniors who are heavily invested in pursuing art, and plan on applying to a

college-level art program. We will begin this course by compiling student artwork to excavate and illustrate the student's goals for their artistic pursuits. We will then design a bespoke action plan that the student will execute during the term to fill any gaps, revise unfinished work, or conceptualize new works. We will also develop optional plans for the forthcoming summer break.

## **MUSIC**

### **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. ***Instrumental Ensemble and Concert Choir meet during the same block. Students may enroll in this course multiple times over their time at Derryfield with permission of the instructor.***

### **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.

***Instrumental Ensemble and Concert Choir meet during the same block. Students may enroll in this course multiple times over their time at Derryfield with permission of the instructor.***

### **Instrumental Composition Honors (F, W, S)**

Open to: Grades 9-12

Prerequisite: By audition with the ensemble director. Students must be enrolled in Instrumental Ensemble.

Taught concurrently with Instrumental Ensemble, students enrolled will be expected to create warm up routines for the regular ensemble and to lead these routines. These students will be assigned as section leaders and lead sectional rehearsals. They will be expected to create original compositions and/or musical arrangements appropriate for the full ensemble, or as a collaboration with their fellow honors students in a separate ensemble. Students are required to keep a practice log and to commit to 90 minutes of personal practice time per week. ***Students may enroll in this course multiple times over their time at Derryfield with permission of the instructor.***

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

Open to: Grades 9-12

The Combined Concert Choir/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. Students may enroll in this course multiple times over their time at Derryfield with permission of the instructor.***

### **Introduction to Guitar (F)**

Open to: Grades 9-12

In this course, students will experience playing the guitar in solo and as a class. An introduction to the

instrument, students will learn strumming fingering technique, how to read music, and improvisation with a lead sheet. Students will learn blues patterns and classical music in addition to pieces they choose for themselves. Students will become familiar with tuning and basic maintenance of the instrument. Throughout the trimester, students are expected to maintain a learner's journal and manuscript notebook to record and reflect upon their process of learning.

### **Introduction to Piano (W)**

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 Ms. Gatzoulis about more opportunities to practice and perform at Derryfield.

### **iSound (S)**

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.

## **DRAMA**

### **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, 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 Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12.***

### **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 Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12.***

### **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.

### **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 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 Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12.***

### **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 audiences by putting it into its 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 Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12.***

## **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***

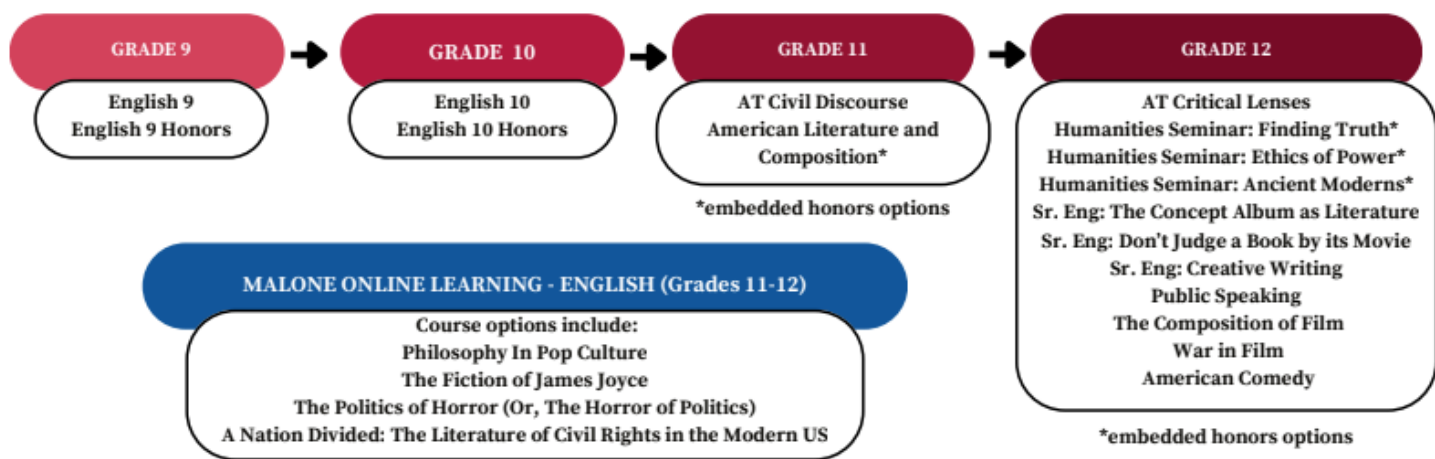
The department will provide opportunities for students to:

- 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 following chart depicts the overall program of study in the English Department. Please refer to the substantive course descriptions that follow for full titles and details.



### English 9: Change Agents (Year Long)

Open to: Grade 9

Daily reading, discussion, and writing to interpret texts are the heart of English 9. 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* and *House on Mango Street*. Students will also study poems, read

independently-chosen novels and 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.

### **English 9 Honors: 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 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 project asking students to synthesize major themes from multiple sources and present their findings in a medium of their choosing.

### **English 10: 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.

### **English 10 Honors: 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 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 10. 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 *The Narrative of the Life of Frederick Douglass* (Douglass); *The Awakening* (Chopin); *The Underground Railroad* (Whitehead); *The Great Gatsby* (Fitzgerald); *Just Mercy* (Stevenson); *Dissent: The History of an American Idea* (Young); *Poverty by America* (Desmond); 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? Who gets access to the American Dream and what does that mean? In this course, students investigate through critical reading of, engagement with, and discussion of a variety of texts the ways in which American identity and American culture have 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 short fiction and non-fiction essays of the early republic to 19th-century thinkers, 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

Literature through Critical Lenses 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's House*, *Jane Eyre*, *Beloved*, *Mrs. Dalloway*, *Angels in America*, *As I Lay Dying*, 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 Fall: Finding Truth (Embedded Honors Option) (F)**

Open to: Grades 11 & 12

The fall term in Humanities Seminar seeks to answer the following question: How can we determine what is true or right in our lives? How do differences in understandings of truth influence the way people act? Using the philosophies of Plato, Nietzsche, Kant, Zhuang Zhou and others, we will analyze art 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, literature and practices of different cultures to understand how they reflect ideas of truth in the purposeful life. 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. Generally, this course is offered as a second History or English course to Juniors.***

**Humanities Seminar Winter: 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 and art 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. 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.***

***Generally, this course is offered as a second History or English course to Juniors.***

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

Open to: Grades 11 & 12

Prerequisite: Either Humanities Seminar Fall or Humanities Seminar Winter

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 or film 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. 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.***

***Generally, this course is offered as a second History or English course to Juniors.***

**Senior English Fall: The Concept Album as  
Literature (F)**

Open to: Grades 11 & 12

Are you ready to dissect some of music’s most profound works? In this elective, students will spend the first half of the trimester collectively examining an influential concept album by artists such as Marvin Gaye, Pink Floyd, or Beyonce in order to understand how musicians use composition, lyrics, sound, and language to create an album around a central theme or idea. During the second half of the trimester, students will learn the necessary skills to create their own serial podcast that examines an iconic concept album of their choice. For this project, students will deconstruct lyrics and instrumentation, and apply literary elements to a culturally relevant album. Writings will include music reviews, analytical pieces, podcast scripts, and comparison essays while readings will consist of articles on music theory, music criticism, and reviews. Students will come away with an understanding of the narrative, thematic, and resistance concept album and will learn to culturally and historically contextualize their album and “read” it as one would read a book.

### **Senior English Winter: Don't Judge a Book by its Movie (W)**

Open to: Grades 11 & 12

The author Stephen King said, "Books and movies are like apples and oranges. They are both fruits but taste completely different." In this trimester-long course, students will investigate the relationship between literature and film in an attempt to answer the following questions: What can film achieve that a novel or play cannot, and vice versa? What is lost in the translation of literature into film, and what makes a "good" adaptation? In the first half of the trimester, students will read and critically examine a class text to explore not only its literary elements, but also its cultural relevance and context. Possible texts could include *Frankenstein*, *Jaws*, or *The Color Purple*. Once complete, students will watch the film adaptation and critically examine and compare the strategies used to visually adapt the story to the screen to determine which form is most successful at telling the story, the written or the visual one. During the second half of the trimester, students will have the opportunity to choose a piece of literature to read and analyze and watch its visual interpretation to determine which form most successfully tells the story. Students will explore the art of review writing, both book and film, as well as gain practice analyzing literary and cinematic elements of storytelling.

### **Senior English Spring: 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, 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 Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12.***

### **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 Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12.***

### **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 Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12.***

### **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 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 Arts departmental requirement. This course may be applied to English departmental graduation requirements in grade 12.***

## **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:

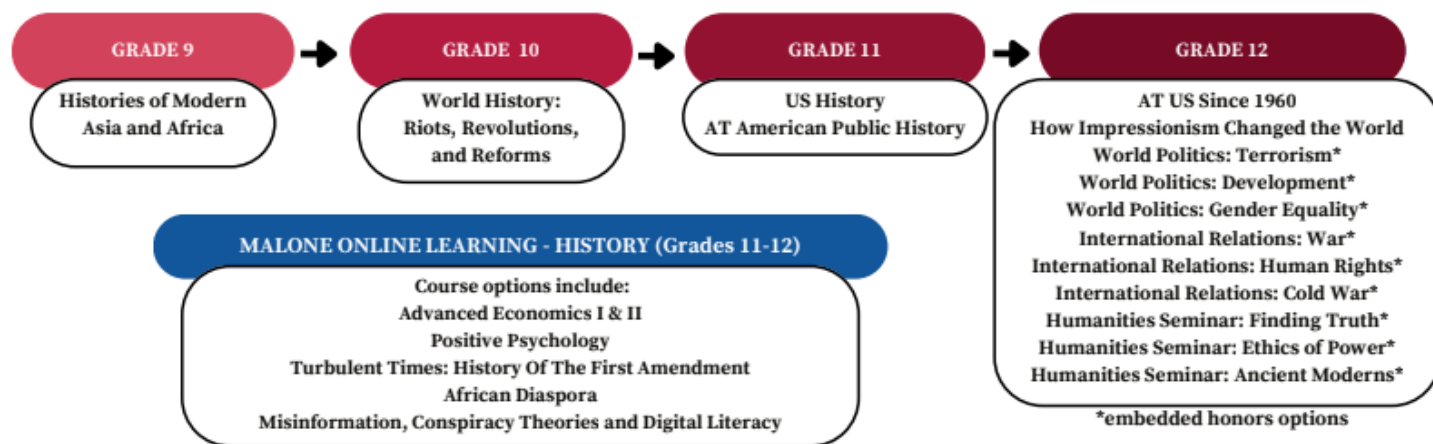
- navigate and analyze unfamiliar historical texts and other relevant sources.
- evaluate scholarly and primary sources’ different points of view based on argument, evidence, etc.
- demonstrate understanding of ideological, historical and/or ethical frameworks and their impact on their own and others’ 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

The following chart depicts the overall program of study in the History Department. Please refer to the substantive course descriptions that follow for full titles and details.



### 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 topics such as Belgian imperialism in the Congo and its aftermath, the rise and fall of the Japanese Empire, 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 insight into the experiences of individuals, ordinary and extraordinary. This course provides a strong foundation for thesis-driven writing, active reading

methodology, persuasive presentation and communication skills, and research tools that students will utilize over the next three years and into college.

### World History: Riots, Revolutions, and Reforms (Year Long)

Open to: Grade 10

Modern world history is a story of riots, revolutions and reforms. This course explores this history by examining revolutionary events in Europe and Latin America from the 17th through the 20th centuries. Beginning with the Enlightenment, it charts how evolving transnational ideas about the meaning of progress dramatically shaped world history. First charting those ideas with the overthrow of Louis XVI in the French Revolution and the rise of Toussaint Louverture in Haiti, the course asks students to grapple with the power of ideology as an agent of historical change. The course pays particular attention to the history of

political philosophies and social forces in its discussion of events including the Industrial Revolution, the Bolshevik Revolution, the rise of Nazi Germany, the Cuban Revolution and the Cold War. This exploration engages students in close reading of primary sources such as Primo Levi's *Survival in Auschwitz*, encouraging reflection on the meaning of historical change for individuals, ordinary and extraordinary, who lived through these events. The structure of the course also grants students the space to continue to polish foundational skills such as effective reading, writing, researching and communicating in various modes. These skills culminate in a Capstone Project which provides the students the opportunity to explore a world revolution of their own choosing and demonstrate the mastery of their skills one final time. Students emerge with a heightened understanding of the ways in which profound revolutionary events have shaped the contemporary world, and with the skills they need to find success as budding historians.

### **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.

**World Politics Fall: 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. ***This course is offered during alternating academic years with the next offering in 2025-2026. Generally, this course is offered as a second History course to Juniors.***

**World Politics Winter: 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. ***This course is offered during alternating academic years with the next offering in 2025-2026. Generally, this course is offered as a second History course to Juniors.***

**World Politics Spring: 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. ***This course is offered during alternating academic years with the next offering in 2025-2026. Generally, this course is offered as a second History course to Juniors.***

**International Relations Fall: 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 Russo-Ukrainian War. 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 war and disorder at the state level and compare intrastate conflict to interstate conflict. ***This course is offered during alternating academic years with the next offering in 2024-2025. Generally, this course is offered as a second History course to Juniors.***

**International Relations Winter: 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 despite threats of violence and lack of access to political institutions. ***This course is offered during alternating academic years with the next offering in 2024-2025. Generally, this course is offered as a second History course to Juniors.***

**International Relations Spring: 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 the “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 is offered during alternating academic years with the next offering in 2024-2025. Generally, this***

*course is offered as a second History course to Juniors.*

**Humanities Seminar Fall: Finding Truth (Embedded Honors Option) (F)**

Open to: Grades 11 & 12

The fall term in Humanities Seminar seeks to answer the following question: How can we determine what is true or right in our lives? How do differences in understandings of truth influence the way people act? Using the philosophies of Plato, Nietzsche, Kant, Zhuang Zhou and others, we will analyze art 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, literature and practices of different cultures to understand how they reflect ideas of truth in the purposeful life. 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. Generally, this course is offered as a second History or English course to Juniors.***

**Humanities Seminar Winter: 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 and art 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. 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. Generally, this course is offered as a second History or English course to Juniors.***

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

Open to: Grades 11 & 12

Prerequisite: Either Humanities Seminar Fall or Humanities Seminar Winter

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 or film 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. 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.*

## **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.

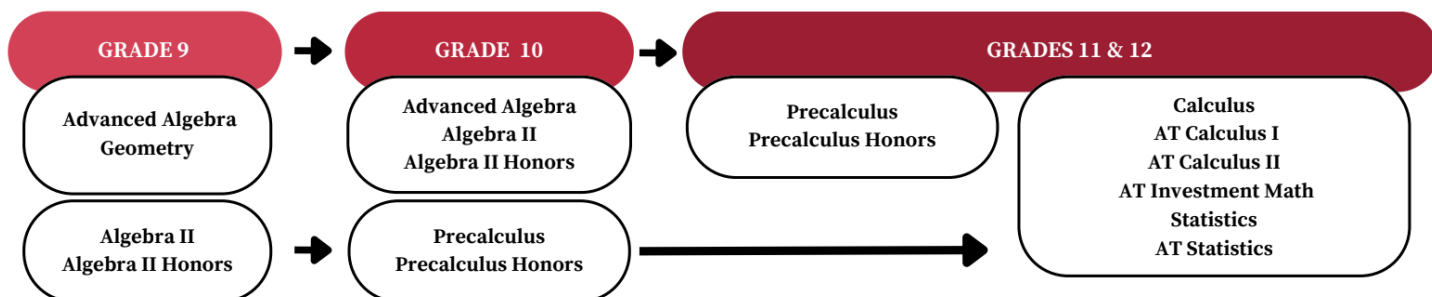
### **THE OBJECTIVES**

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**

The following chart depicts the overall program of study in the Mathematics Department. Please refer to the substantive course descriptions that follow for full titles and details.



STEAM X (These courses can be taken for Math credit)

Software Design with Java  
AT Software Design with Java  
STEAM X: Engineering Design Process  
STEAM X: 3D Design  
STEAM X: Engineering Alternative Energy  
STEAM X: Legacy and Independent Projects

MALONE ONLINE LEARNING - DISCIPLINE: MATH (Grades 11-12)

Course options include:  
Multivariable Calculus  
Linear Algebra  
Vector Calculus  
Advanced Economics I  
Advanced Economics 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: Advanced Algebra or equivalent  
The Geometry course is designed to continue the students transition from concrete to abstract reasoning. It begins with a thorough review of geometry's foundational elements, encouraging students to apply geometric and algebraic principles through interactive hands-on, inquiry-driven, and proof-centered activities. We cultivate problem-solving, reasoning, justification,

and proof skills by delving into the intricacies of shapes and their properties, exploring rigid transformations, congruence, and the correlation between similarity 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: Advanced Algebra and Geometry or equivalent

Our Algebra II course focuses on the study of functions, including linear, quadratic, exponential, logarithmic, rational, and higher degree functions. This curriculum is designed to nurture skills in graphical, analytical, verbal, and numerical analysis, essential for adeptly navigating and manipulating a range of functions.

Topics of study will include:

- Linear equation and inequalities in 1, 2, and 3 variables
- Linear systems

- 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

### **Algebra II Honors (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

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

Prerequisite: 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. 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

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

Prerequisites: Algebra II Honors

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 AT Calculus II; after completing this course, students may advance to AT Calculus I, Statistics, AT Statistics, Software Design with Java, AT Software Design with Java or AT Investment Math.***

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

Prerequisite: Precalculus

AT Calculus I 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 Mathematics: Calculus II.

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 II (Year Long)**

Prerequisite: AT Calculus I (or Honors Calculus Before the 2023-2024 School Year)

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 (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, stemplot, normal quantile plot
- Two-variable statistics—measures of linearity and transformation to linear graphs
- Scatterplot, residual plot
- Surveys
- Bias
- Types of Sampling
- 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: Statistics (Year Long)**

Prerequisite: Precalculus

AT Statistics coursework includes three major areas of emphasis: data collection, data description, and data analysis as described below. The course will cover many of the same subjects in Statistics, but at greater depth and faster pace. Instruction will be more inquiry based, and students will complete a major project to conclude the course.

Topics of study will include:

- One-variable statistics: measures of central tendency and variability
- Graphs—histogram, box plot, dotplot, stemplot, normal quantile plot
- Two-variable statistics—measures of linearity and transformation to linear graphs
- Scatterplot, residual plot

- Survey Bias
- Types of Sampling
- Comparative experiments
- Simulations
- 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 single means and proportions as well as differences between two means or two 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)**

Open to: Grade 12

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. 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 TradingView's software. We will learn about some of the many different functionalities that TradingView 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 analysis to review our results. Then, we will learn

how to code using PineScript. 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. **Required: a laptop running Windows, Linux, or MacOS. This course is cross-listed with the STEAM X Department.**

### **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 the *Computer Science Practice and Principles* LEAD programming course, or the *Computer Science* elective 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, exception handling, objects and classes, interfaces, inheritance, and polymorphism, computer graphics, 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 other high-level programming languages.

**Required: a laptop running Windows, Linux, or MacOS. This course is cross-listed with the STEAM X Department.**

### **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. **Required: a laptop running Windows, Linux, or MacOS. This course is cross-listed with the STEAM X Department.**

### **STEAM X Electives (for Mathematics Department 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 STEAM 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 STEAM courses is a valuable extension of their math study.

- STEAM X: Engineering Design Process (F)
- STEAM X: STEAM X: 3D Design (W)
- STEAM X: STEAM X: Engineering Alternative Energy (S)
- STEAM 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.

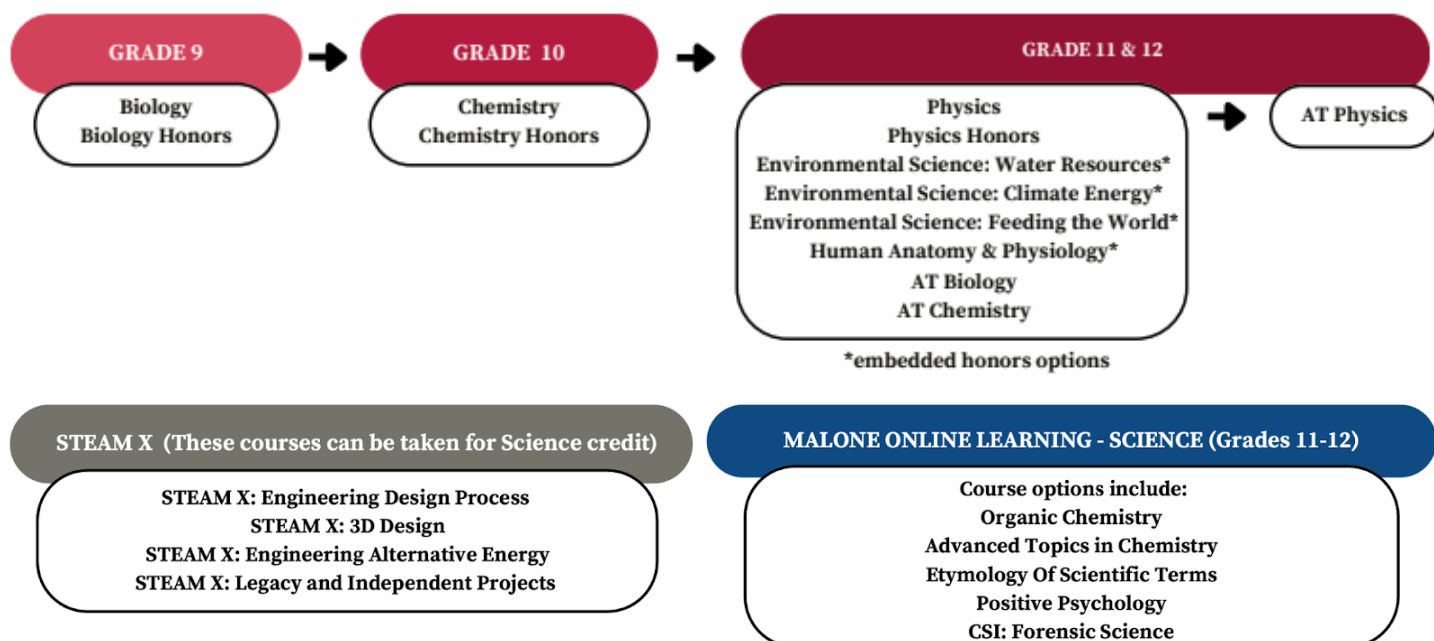
### **THE OBJECTIVES**

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

The following chart depicts the overall program of study in the Science Department. Please refer to the substantive course descriptions that follow for full titles and details.



### Biology (Year Long)

Open to: Grades 9 & 10

Biology allows students to explore the relationship between living things and their environment and teaches them how cells function. 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 plant anatomy. 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.

### Biology Honors (Year Long)

Open to: Grades 9 & 10

Biology Honors takes a deep dive 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 activities, students will incorporate the scientific approach to question concepts and solve problems. Students will be introduced to primary scientific literature and will be expected to explore and interpret material independently and participate actively in class discussions on a daily basis. 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.

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

Open to: Grades 10 & 11

Chemistry Honors covers similar topics as Chemistry, but explores the material in greater depth, both conceptually and mathematically, and at a much faster pace. Chemistry Honors students must be able to quickly assimilate new knowledge, accessing additional support as needed. Additional topics of study include solution chemistry, properties of gasses, 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.

### **STEAM X Electives (for Science Department credit)**

Open to: Grades 9-12

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

- STEAM X: Engineering Design Process (F)
- STEAM X: STEAM X: 3D Design (W)
- STEAM X: STEAM X: Engineering Alternative Energy (S)
- STEAM 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.

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

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

Prerequisite: Current enrollment in Precalculus or higher in Mathematics.

Honors Physics covers the same topics as Physics, but does so in much 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. 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. Students who can seamlessly apply geometry and algebra skills to problem-solving will have greater success in Honors Physics.

### **Environmental Science Fall: Water Resources (Embedded Honors Option) (F)**

In the opening weeks of the term, students are introduced to a variety of current and historical perspectives on the environmental movement. From there, the focus shifts to the distribution and quality of water resources throughout the globe. Students collect and analyze freshwater from the Derryfield campus, and also explore how vegetation can be influenced by human activities. For the final project, students apply all of the

course topics to a specific river watershed, presenting the major challenges and impacts of human activities on their chosen region. Honors students are expected to read primary scientific literature and current events related to the course topics, and present their findings to the class.

### **Environmental Science Winter: Climate and Energy (Embedded Honors Option) (W)**

Students begin the term modeling how turning on the lights in their home or classroom impacts the global air temperature. From there, students learn about the structure, composition, and role of Earth's atmosphere, and how it has changed as a result of human influence. Students explore the origins and impacts of fossil fuels, greenhouse gasses, and different methods of generating electricity. Potential solutions or mitigation strategies for climate change are discussed. The term culminates in a student-designed climate action project, where students connect with the broader community to raise awareness and instigate change. Honors students are expected to read primary scientific literature and current events related to the course topics, and present their findings to the class.

### **Environmental Science Spring: Feeding the World (Embedded Honors Option) (S)**

As our global population approaches 8 billion, the need for food and land resources has also grown. In this term, students will consider the distribution of food resources across the globe, compare and contrast commercial and sustainable agriculture practices, and discuss the impact of food choices on the environment. Juniors in this course will develop and carry out a group project during the final 5 weeks of the term to address a local environmental challenge of their choice. Honors students are expected to read primary scientific literature and current events related to the course topics, and present their findings to the class.

### **Human Anatomy and Physiology (Embedded Honors Option) (Year Long)**

Open to: Grades 11 & 12

Prerequisites: Biology and Chemistry

This course is designed to provide an in-depth exploration of the intricacies of the human body's structure and function. Through a combination of theoretical study and hands-on laboratory experiences, this course aims to offer an advanced understanding of human anatomy and physiology. Students enrolled in this course will explore an extensive range of topics, including, but not limited to, tissues and organs, the musculoskeletal system, the cardiovascular system, the respiratory system, the nervous system, and the digestive system. Throughout the course, students will engage in laboratory experiments, anatomical dissections, hands-on activities, and research projects to deepen their understanding and practical application of these systems. Students enrolled in the Honors Option will be expected to complete assignments that demonstrate their ability to analyze data and explore the body systems at a deeper level.

### **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 molecular biology. 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. The project culminates in a formal scientific presentation to a group of PhD scientists in addition to their peers and other Derryfield teachers. Students explore the role of ethics and equity in scientific research.

#### **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 Chemistry Honors 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, have mastered the basics of

stoichiometry and chemical bonding, and have 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, and electrochemistry. 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 about their topic.

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

Open to: Grades 11 & 12

Prerequisites: Physics, current enrollment in AT Calculus I

The Advanced Topics Physics course is a capstone course for the physics curriculum at Derryfield. The course builds on material covered in the Physics Honors 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.

## **STEAM X**

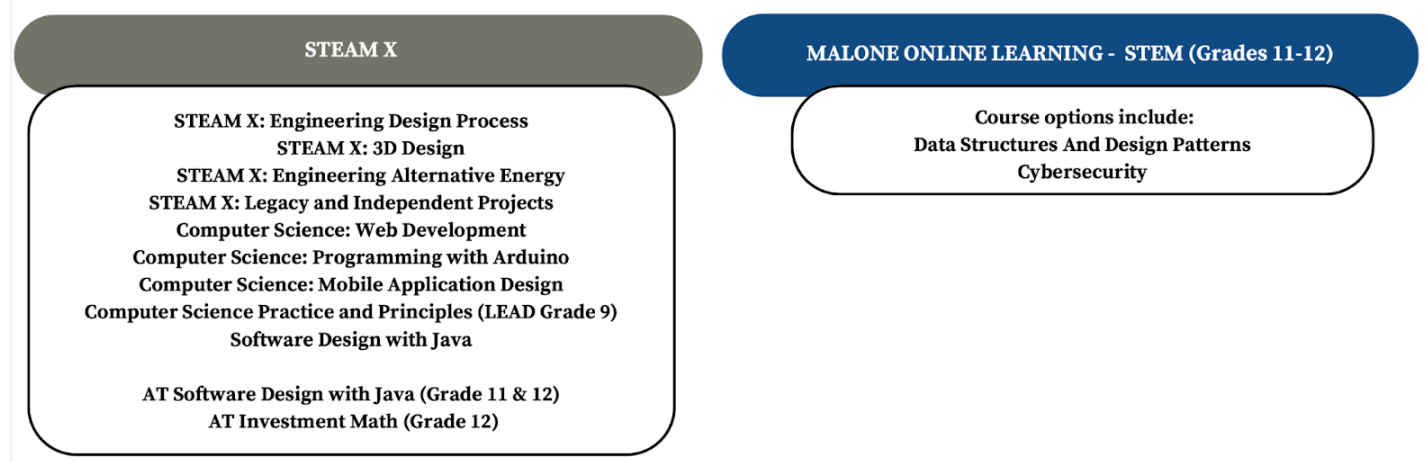
### ***THE PHILOSOPHY***

The STEAM X program introduces students to Design Thinking models that leverage Science, Technology, Engineering, Art and Mathematics (“STEAM”) to solve authentic problems. In a STEAM X course, students engage in hands-on design work as they tackle challenges and tasks. Whether it’s designing software, designing an investment tool, building a robot, or experimenting with wing design, by challenging students to explore the unknown, we aim to ignite student creativity and empower them to answer important world questions.



## THE PROGRAM

The following chart depicts the overall program of study in the STEAM X Department. Please refer to the substantive course descriptions that follow for full titles and details.



### STEAM X: Engineering Design Process (F)

Open to: Grades 9-12

How are products developed? Why is there a new iPhone every year? What requirements need to be satisfied before an idea becomes a reality? In this course, students will be introduced to the iterative nature of the Engineering Design Process and work through it on a variety of projects. Using foundational engineering principles and hands-on practices, students will brainstorm, design, prototype, and develop solutions to real-world engineering problems. Engineering projects may include crafting a structure to protect an egg when dropped from a significant height, constructing a truss bridge with popsicle sticks, creating a water wheel or windmill to generate electricity, and designing an efficient assembly line.

### STEAM X: 3D Design (W)

Open to: Grades 9-12

Bring your ideas to life! In this course, students will be introduced to the fundamentals of 3D computer design and utilize shapes-based modeling software to push the limits of their creativity and technical understanding. Students will utilize Derryfield's state-of-the-art makerspace to 3D print designs and construct final projects to satisfy specific criteria. Introductory engineering projects may include designing a statue that can print in a specified time, and creating gravity-powered and motorized

race cars. As the term draws to a close, students will be tasked with identifying a specific problem, then developing and executing a unique solution to said problem. The only limit is your imagination!

### STEAM X: Engineering Alternative Energy (S)

Open to: Grades 9-12

What is the future of energy? As humanity seeks to reduce greenhouse gas emissions and limit climate change, innovation in sources of renewable energy such as wind, hydro, solar, and nuclear will be vital. In this course, we will explore the current state of these energy sources as well as promising new technologies. While we won't be able to build our own nuclear reactor, engineering projects may include building mini wind turbines, hydroelectric generators, and solar-powered cars.

### STEAM 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 the STEAM X faculty, 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. Brandt for more information.

### **Computer Science: Web Development (F, W, S)**

Open to: Grades 9-12

In this section of the Computer Science STEAM 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!

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

Open to: Grade 9

This exposure course is designed to give all freshmen 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 STEAM courses. ***This course is graded pass/fail and is included in LEAD programming. It is not open for separate course requests.***

### **Computer Science: Programming with Arduino (F, W, S)**

Open to: Grades 9-12

In this section of the Computer Science STEAM 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!

### **Computer Science: Mobile Application Design (F, W, S)**

Open to: Grades 9-12

In this section of the Computer Science STEAM 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!

### **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 the *Computer Science Practice and Principles* LEAD programming course, or the *Computer Science* elective 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, exception handling, objects and classes, interfaces, inheritance, and polymorphism, computer graphics, 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 other high-level programming languages. **Required: a laptop running Windows, Linux, or MacOS. This course is cross-listed with the Mathematics Department.**

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

Open to: Grades 10-12

Prerequisites: Permission from the teacher

Embedded in the *Software Design with Java* course, this advanced topic (AT) course allows students with a stronger interest in computer science to learn the Java programming language. AT students study the same topics as listed for the *Software Design with Java* course, but cover these topics in greater detail. AT students are also introduced to advanced programming concepts, including numerical methods and simulation, computer animation and game programming, and networking / socket programming. Students also learn practical computer skills and learn how to use modern editing, version control, and debugging tools. No specific prior knowledge is required, but having some programming experience and mathematical maturity are beneficial. AT students are assigned additional

reading material and given extra programming assignments and assessments for this embedded class. **Required: a laptop running Windows, Linux, or MacOS. This course is cross-listed with the Mathematics Department.**

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

Open to: Grade 12

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. 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 TradingView's software. We will learn about some of the many different functionalities that TradingView 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 analysis to review our results. Then, we will learn how to code using PineScript. 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. **Required: a laptop running Windows, Linux, or MacOS. This course is cross-listed with the Mathematics Department.**

# **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***

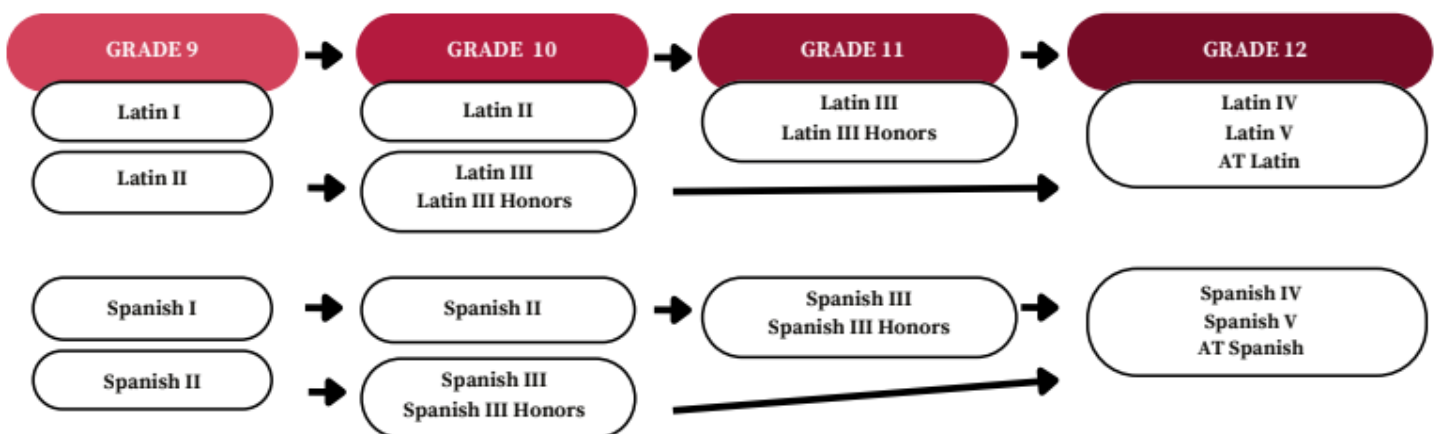
Guided by the philosophy and guidelines for language learning in the 21st Century of the American Council of Teachers of Foreign Language [ACTFL], we focus on student engagement and construction of understanding through critical-thinking, creative collaboration, and communication in the target language.

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***

The following chart depicts the overall program of study in the World Language Department. Please refer to the substantive course descriptions that follow for full titles and details.



### **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 through the Suburani textbook series. 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 “Bringing Latin to Life” 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 continue their study of the language through the Suburani textbook series. Through thematic Latin readings about an array of topics, including education, gladiator competitions, and military expansion, students hone their translation skills, incorporate new grammar concepts, and gain insight into the Roman world. Throughout the year, students have the opportunity to engage in collaborative work and to focus on topics which are of particular interest to them. 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 Latin III Honors 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 a research deep dive into the history/mythology of characters and places referenced in the *Aeneid*.

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

Open to: Grades 11 & 12

Prerequisites: Latin III Honors, 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 next be offered in 2025-26.***

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

Open to: Grades 11 & 12

Prerequisites: Latin III Honors, 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 next be offered in 2024-2025.***

### **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, body and health, 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. Each year Spanish II students participate in a cultural experience, such as a food-tasting, to expand their global awareness to the diversity of the Spanish speaking world. 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 also work on research and collaborative projects such as using new vocabulary to discuss and solve environmental concerns in Colombia or plan an arts-focused trip in a Spanish-speaking city. 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.

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

Open to: Grades 9-12

Prerequisites: Spanish II or approval of teacher and department chair

Spanish III Honors is an accelerated 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. Students in III Honors will work with greater independence and move more quickly through new grammar, opening up more time for in-depth studies of topics of interest. Topics include the Venezuelan economic and refugee crisis in the 21st century, environmental concerns in Colombia and how to conduct a job fair in Spanish. Students will work collaboratively on both research and creative projects, as well as seminars to discuss historical and current events. The class is taught exclusively in the target language, and students are presented with more recordings and videos in Spanish with no translation. Students are expected to participate daily in Spanish with a strong emphasis on more complex communication and expression.

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

Open to: Grades 9-12

Prerequisites: Spanish III, Honors Spanish III or approval 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 approval 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: Language and Culture through Literature and Media (Year Long)**

Open to: Grades 11 & 12

Prerequisites: Approval 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 and 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 next be offered in 2025-26.***

### **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

### **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 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.

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, 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 next be offered in 2024-25.***

If students are interested in exploring this option, they should contact Mike Leary, Language Department 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 Chair by February 16 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 Chair and recommended to the Division Head and Dean of Academics for approval.
- Derryfield acknowledges it cannot ensure that a student will have the same level of experience or success with an online provider as the student 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.
- Students must enroll in a language program that does not conflict with any other Derryfield commitments or classes.
- Students/Families will be asked to provide the school 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 in the transcript notes.
- Students must finish their course by the last day of the academic year.

## **ATHLETICS**

### ***THE PHILOSOPHY***

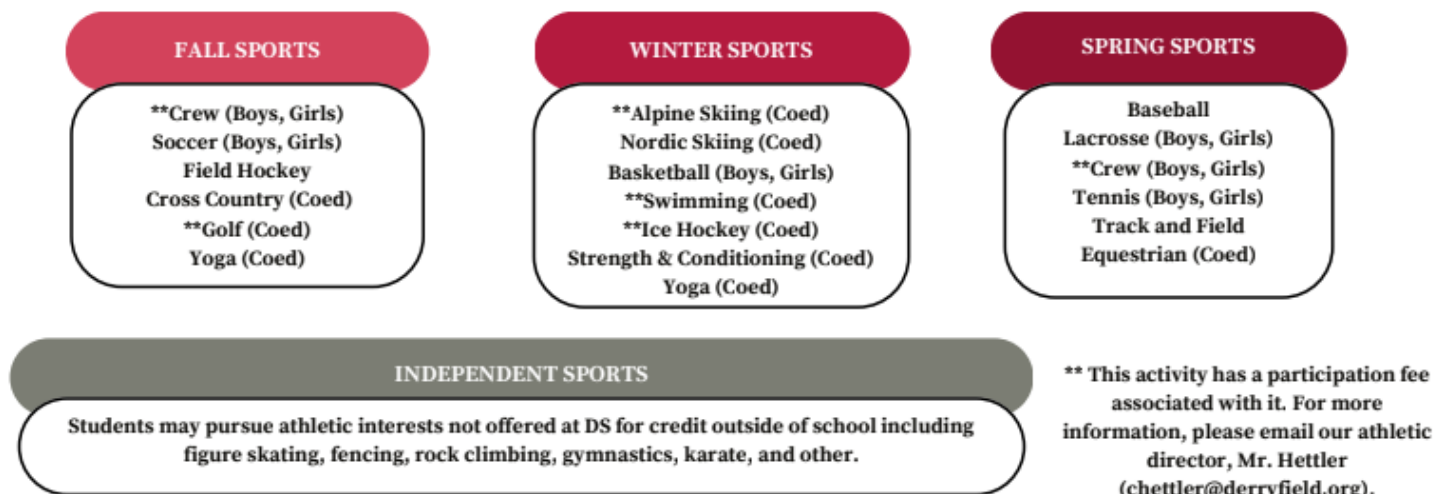
Derryfield offers a comprehensive interscholastic athletic and physical activity program on several levels. The school competes in numerous sports in both the Middle and Upper Schools during all three seasons. There are also opportunities to participate in non-team activities. While time of involvement 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, and athletic trainer. 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

The following chart depicts the overall program in Athletics. Please refer to the description that follows for more details.



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 (see below) 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. A trimester of community service may only be used once for athletic credit during a student's four years in the upper school.

### **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.

Students who receive a part in the upper school play, musical or pit band for the musical are eligible to receive an athletic credit. Stage crew is not eligible for athletic credit. Participation in any of these activities will equate to three or more days a week and for four or more hours per week for a total of ten weeks.

Students may elect to use either the play, musical or pit band once during the school year for athletic credit. This would count as their one independent athletic activity for the year and they would not be eligible to participate in another. They would need to participate in another Derryfield sponsored athletic activity in order to fulfill their athletic requirement for the year.