

# Commonwealth

Academic Catalog



“I feel a rush of excitement every day as I enter the Dartmouth lobby and join a mass of kids sitting, standing, running, finishing up that last bit of homework—already fully engaged in another day at Commonwealth.”



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# Graduation and Distribution Requirements

**B**ecause new students come to Commonwealth from many different types of schools, their training and levels of preparation for our courses vary. We use placement testing and conversations with the Director of Studies and teachers to help us design a first-year schedule suited specifically to your needs and interests. In subsequent years, your advisor (in consultation with the faculty) will help you to shape your program.

## PROGRESS THROUGH THE CURRICULUM

**T**he standard course load at Commonwealth is five or five and a half academic courses and one or two art courses per year. All classes, whether they are full- or half-credit courses, run for the entire year. You must be enrolled in the equivalent of at least four full academic credits and one art course each year to remain in good standing. Our minimum graduation requirement is sixteen credits.

## CAPSTONE PROJECTS FOR SENIORS

**I**f you have a passionate interest in a particular subject, have proved yourself intellectually engaged and self-motivated (and reliable about deadlines), you will have the opportunity to apply for a year of independent study under the guidance of a faculty mentor. Applications to the Capstone Program are due in spring of junior year, and as an accepted applicant you will begin research and correspond with your mentor during the summer. Over the course of senior year, you meet weekly with your mentor and with the group of Capstone scholars. At scheduled intervals, you submit progress reports and discuss further research with your mentor and department. Finished projects will vary, of course, according to each year's chosen topics, but by spring, all seniors in the program produce a substantial piece of writing and have the exciting chance to present their year's labor and discoveries to the entire school.

9th Grade	10th Grade	11th Grade	12th Grade
English 9	English 10	English 11	English 12 or English 12 Reasons for Writing
Ancient History	Medieval World History	U.S. History	Modern European History or other history elective(s)
Biology 1	Chemistry 1 or Chemistry 1 Advanced	Physics 1 or Physics 1 Advanced	Advanced science elective(s)
Geometry or Geometry Advanced	Algebra 2 / Precalculus or Algebra 2 / Precalculus Adv.	Calculus 1 or Statistics	Theoretical Calculus or other math elective(s)
Language level 1	Language level 2	Language level 3	Language level 4
Language and Ethics* City of Boston* Health and Community*			Readings in Ethics
One arts course or more	One arts course or more	One arts course or more	One arts course or more

The chart above shows a typical five-subject schedule. **Bold type** indicates graduation requirements and the asterisk (\*) indicates a trio of special ninth grade courses, which are taken in consecutive 10-week sessions.

**Note that in course listings:**  
**E** designates an elective.  
**AP** indicates that many students take the corresponding Advanced Placement test following this course. The course does not necessarily follow the College Board AP curriculum.

# At Commonwealth

**We all, teachers and students alike, come from diverse backgrounds and places to work together in an intimate, intellectually vibrant community.**

“Although we have a unifying Commonwealth identity, we come from different locations throughout the greater Boston area and represent different cultures. I have gotten to know and love people with unusual talents and tastes who I would not have known if I had ended up at a larger school. Here, we become aware that not everyone we meet will have the same story as our own.”



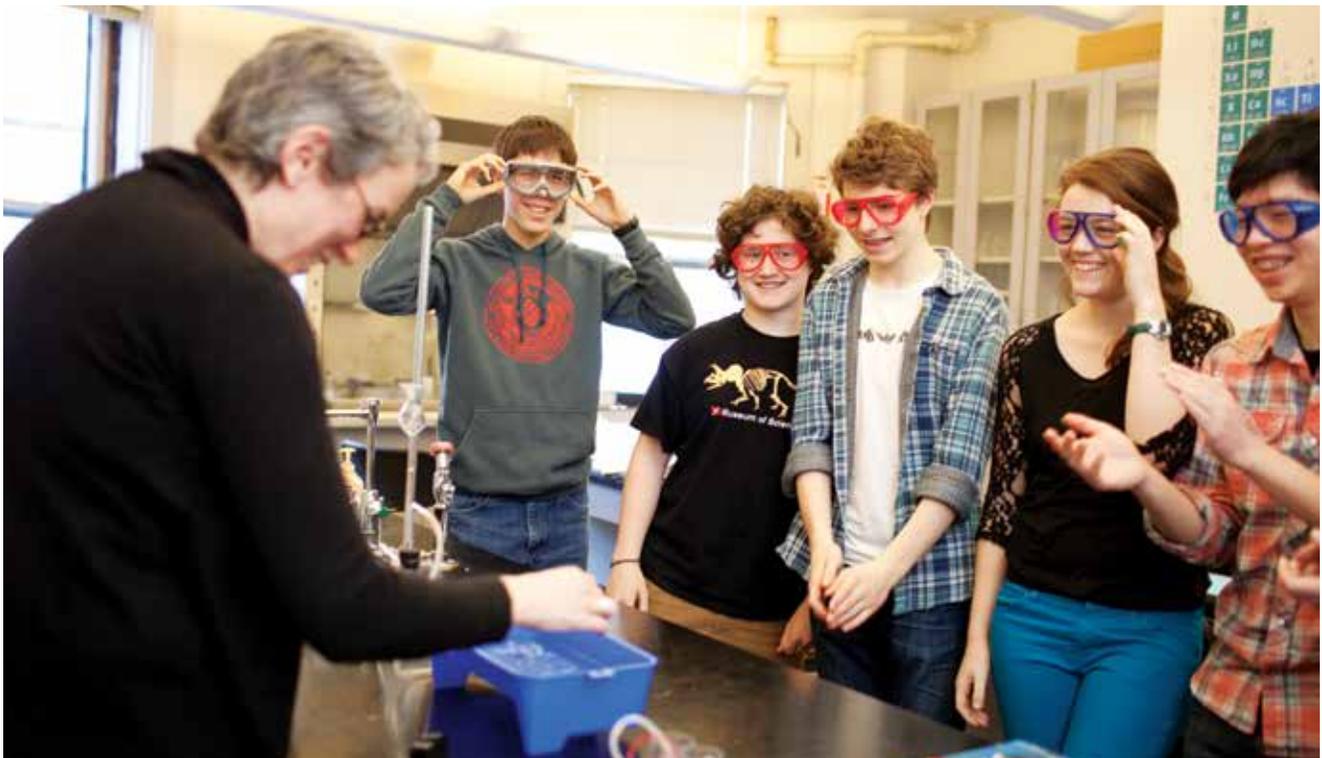
**Our classes are small and discussion-based. Easy give and take among students and teachers inspires independence of thought.**

“We can enjoy thinking for its own sake, convinced that the real point of studying something complicated is not just to develop wit but to sharpen our understanding; not to be clever for others, but to be discriminating for ourselves.”



**The arts play an indispensable role in our daily lives.**

“It was in the ceramics studio that I learned how not to overthink or overwork things. It’s easy and cheesy to say that’s a life lesson, but it changed my perspective a lot!”



**All of us in the community do our best to behave thoughtfully, act responsibly, and take initiative when it's necessary.**

“Just as we realize there is a purpose to homework, we realize there is a purpose to taking care of the school and each other. The mentality of personal hard work and community spirit is infectious. The result is a fertile, happy place.”



**We know that academic life isn't everything.**

“One of my favorite things about the Commonwealth student body—aside from the general enthusiasm for learning within the classroom—is the range of interests my peers have that lie outside academics.”



**Our urban location, right in the middle of the Back Bay, offers nearly endless possibilities for our academic, community service, and extracurricular programs.**

“We started (but didn't finish) a list of all the times and reasons we go out the school door and into Boston: the City of Boston course, to start with; Ben and Jerry's Free Cone Day; January projects; community service; Starbucks; sports—practice and games; play and concert rehearsals and performances (except for jazz); Frisbee on the Commonwealth mall; class visits to labs, museums, and lectures; museum and impromptu days; walks in the Public Garden, to Chinatown, or just around the block; the BPL—and fire drills.”



**Faculty attention, one on one, is always available for both students who need extra support and those who want to pursue a subject beyond the syllabus of a given course.**

“The relationships we have with our teachers generate a warmth that persists throughout



our time here. The conversations we have with them sometimes seem a more vital part of our education than anything on the syllabus. I can almost chart my own development by the talks I've had with my teachers and my advisor.”



**Our goal is to help every student establish the foundation for a satisfying and productive life.**

“While I was interning at the ICA, I began to think seriously about my career after school, imagining myself in the roles I was witnessing. It was then, realizing I could see myself in such positions ten years down the road, that I understood: Commonwealth was preparing me for life beyond school.”

# The Ninth-Grade Experience



**“When you study a city—walking through its neighborhoods, sampling its foods, looking at its beautiful and ugly spaces, its historic houses, and its surprises—it becomes your city.”**

**Y**ou’ll find that while entering a rigorous new high school may be fun, it can be complicated: dealing with new classes, new teachers, and a whole new culture involves all sorts of adjustments. At Commonwealth, we have designed a first year aimed at helping you settle in, make friends, and learn how to do your best work as soon as possible. Your programs will vary—based as they are on your backgrounds, levels of preparation, and interests. But all freshmen take a special set of three ten-week (trimester-long) courses: City of Boston, Health and Community, and Language and Ethics. (New sophomores also take Language and Ethics.)

Even before you set foot in the building, you are each assigned an advisor and a student buddy. Both will get in touch with you during the summer, and once school starts, you will meet regularly with your advisor one on one. He or she will answer your questions, offer support, or simply take time to chat. In October, when you have gotten to know all your teachers, and after the fall school trip to Maine, you have the opportunity to indicate your preferences for a permanent advisor.

During your first semester here, you will spend your free periods in study hall. This arrangement provides structure and encourages you to focus and use your time productively. It also gives you easy access to teachers if you become snarled in a homework assignment.

We want you—and your families—to understand that if you learn to welcome academic challenge, feel free to join in lively class discussions, seek out your teachers when you feel the need, and carefully read their comments on your written work—in short, if you engage fully with your studies—your grades will take care of themselves. To this end, though teachers give grades (and write you lengthy comments) to help you assess your progress, at the end of freshman year, your final letter grades convert to a P (pass) or an E (fail) on your transcript.

## SPECIAL COURSES FOR NINTH GRADERS

### City of Boston

This trimester-long course is designed to make you comfortable with the city of Boston while at the same time examining the uncomfortable questions cities raise. As we eat our way through Boston (cannoli, banh mi, ice cream, pizza) we will examine how Boston’s neighborhoods differ from one another and how they have changed over time. Classroom discussions focus on the costs and benefits of segregation and economic development, as well as environmental justice. Throughout we will be asking two linked questions: Who decides how cities change? And who should decide? In a way, this class is a mini-course in the question of what it means to have a multiethnic, multicultural democracy—a question our country has been debating since its inception.

### Health and Community

Smart and information-savvy as your generation is, it might surprise you to discover how many people mistakenly believe you can get a sexually transmitted disease from a toilet seat, or similar myths. Health and Community (which meets three times a week for ten weeks) provides a comfortable place (or as comfortable as possible) to examine crucial intimate questions. We learn about different drugs, what leads some people to abuse them, and their effects on brain chemistry and behavior. We explore the biology of sex and (using some materials from Planned Parenthood’s “Get Real” curriculum) learn about sexually transmitted infections and how to prevent them. The school’s psychologist joins us for a number of discussion sessions dealing with mental health and wellness and ways to manage stress.

At the end of the course, you will have learned to think and talk—with clarity and maturity, and without embarrassment—about complicated matters, many of which, at one time or another, in one way or another, will affect every one of us during our lives. And you will have the information you need to make healthy, informed choices.

# The Headmaster's Courses

If you're a ninth grader or a new tenth grader, you take a ten-week class with the Headmaster. As a senior you meet with him again—a complement to your first seminar. In addition to having the pleasure of teaching you twice, the Headmaster can assess the progress you've made in your Commonwealth career as you prepare for and apply to college. In our small school, knowing our material intertwines with knowing each other's minds and characters. Teachers, including the Headmaster, work with their office doors open—you can freely walk in to talk, or, if time is short, make an appointment to talk. The open interchange of ideas, whether in the classroom, the hallways, or the lunchroom, means that we all continually discover the thrill of the interconnectedness of knowledge.

**“When I came to Commonwealth, I knew I was interested in studying literature; I saw everything else as a requirement. I've realized, however, that education doesn't involve such clear division. I find that I am continually overlapping, unifying, making connections between language, art, history, and science.”**

## Language and Ethics

*(For ninth graders and new tenth graders)*

**“One of my aims in teaching this course is that you learn to distinguish between an opinion and an argument (and between a good argument and a bad one) and to see how words—with the social and political baggage they carry—shape human relationships.”**

In the first five weeks, we address matters of critical questioning, the relationship of thinking and emotion, and the ethics of argument. We read texts of William Golding (“Thinking as a Hobby”) and Plato (usually the *Crito*). And using *A Workbook for Arguments*, we wrestle with the principles of critical reasoning. In the second half of the course, you practice public speaking, a skill you will put to use making announcements, class presentations, and other speeches during and after your Commonwealth career. Each of you will compose and make an announcement for a serious event, or a silly one—“National Read in the Bathtub Day,” for example. Toward the end of the course, you will each deliver a longer speech to the class on a topic of your choice.

## Readings in Ethics

*(For twelfth graders)*

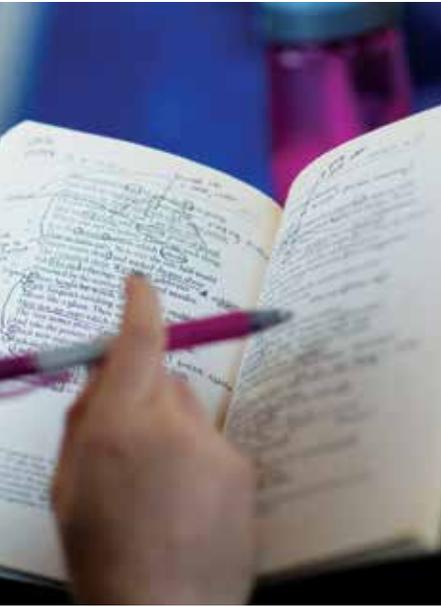
**“In our discussions, by encouraging you to care about words and their use, about reasoning, and about the blind spots all of us share, my hope is that you will learn to listen better—because attentive listening is an ethical act—and to think better.”**

You're ready to explore a range of difficult topics. Through such texts as Ellison's *Invisible Man* and the *Bhagavad Gita*, we examine concepts of freedom and its relation to the individual and social forces that shape our identities. We also circle back to the kinds of questions first raised in Language and Ethics, reading Michael Sandel's *Justice: What's the Right Thing to Do?* and Kathryn Schulz's *Being Wrong: Adventures in the Margin of Error*. We focus particularly on the tensions and discrepancies between realism (the difficult choices life forces upon us), our moral promptings, and our fallibility as humans.



**“Close reading changed me fundamentally. I learned to pay attention to the different layers of meaning that can come out of even a single word or phrase. For me, this was the first time there didn't seem to be a difference between my 'life' and my 'intellectual life.'”**

# English



**“Commonwealth teaches us that you can treat the entire world as a text to be rigorously read.”**

From the very first day of English 9, the emphasis in our English courses is on careful reading and critical thinking. As you learn to practice these arts, you’ll discover how much more pleasure you begin to take in what you read.

**“I used to read books in black and white, but three years of Commonwealth English classes have taught me to see all the colors.”**

Commonwealth’s sequence of full-year English courses presents readers with a wide range of texts in carefully ordered juxtaposition. In your work in class and at home you focus on the authors’ language, their imaginative vision, and the artful strategies they devise.

**“Of all the things I’ve learned at Commonwealth, close reading has transformed me the most. I could talk about the patience and confidence close reading has given me, and how I can look at the same five lines of a poem about 100 times, and, magically, still get something out of it.”**

Centered on close reading, a changing roster of half-credit electives (mostly for eleventh and twelfth graders) addresses your more specific literary interests (Shakespeare, for example, or modernism).

**“It’s the act of throwing yourself wholly into a book or idea, letting yourself be seduced, that makes reading and thinking so attractive. Heart and critical intellect come together at Commonwealth.”**

As each year progresses, you encounter increasingly challenging works and pursue great and elusive questions. You come to understand that questions, not answers, are the reward that literature offers.

**“The idea that picking something apart completely can make it more interesting might be counterintuitive. Sometimes it doesn’t work; after teasing out so many different strands, all you’re left with is a bunch of raggedy threads and a comment from your English teacher telling you that you made a lot of good observations but didn’t quite bring everything to a conclusion. Sometimes, however, you can make connections that blow your mind.”**

## English 9

Reading, thinking, talking, listening. This class provides the foundation for your four years of Commonwealth English classes: you learn how to read with sustained attention—to listen carefully to the particular language of a text, to perceive its impact, and to express what you have discovered in short, well-constructed essays. In class discussion, you work with your classmates on trying out and refining your ideas about a reading. You get plenty of practice writing—and plenty of feedback, too—with frequent one- to two-page analytical essays; sometimes you will have the opportunity to imitate or parody distinctive styles of writing. Texts may include: *The Iliad* or *The Odyssey* (dovetailing with the ninth-grade Ancient History course); Shakespeare, *Much Ado About Nothing*, *Romeo and Juliet*, or *Julius Caesar*; Brontë, *Jane Eyre*; Dickens, *A Tale of Two Cities*; Twain, *Huckleberry Finn*; Thomas, *Under Milk Wood*; Naipaul, *Miguel Street*; Rhys, *Wide Sargasso Sea*; Kingston, *The Woman Warrior*; Dillard, *An American Childhood*; and a smorgasbord of folktales, short poems, and stories.

**“I learned to read not just for plot, and soon realized that the books I was reading were full of subtleties to be discovered—words begging to be underlined, connections waiting to be made.”**

## English 10

The plot thickens! As a tenth grader, you will refine your skills as a literary critic. You work with a variety of texts in which you encounter narrators who cannot be trusted, plays in which no character is “right,” and heroes who are not necessarily sincere (or even particularly “heroic”). You learn to piece together an argument based on increasingly complicated textual evidence; close reading will help you to find your way and draw conclusions about complex matters even in the absence of a trustworthy narrator’s strong helping hand. And in your essays, you’ll focus on how to describe clearly the perceptions you uncover. Texts often include: Shakespeare, *Macbeth* or *Richard II*; Dickens, *Great Expectations*; short stories by Hemingway, Lawrence, Mansfield, Welty, Lahiri, and others; essays by Orwell; dramatic monologues; and Hurston, *Their Eyes Were Watching God*, or Kincaid, *Annie John*.

## English 11

**AP** This year is devoted to listening to the enormous expressive range of the human voice as rendered in written words. We pay increasingly close attention to diction, tone, patterns of speech, the arc of an argument—to the way so much hinges on exactly *how* things are said by poets, characters, and narrators. Take Shakespeare’s Hamlet, whose intense urge to speak the truth drives him to express himself in a multitude of voices. We study literary works in a non-chronological order designed to allow particular voices to resonate with and build on each other. And we read at a leisurely pace, often aloud and together. We spend most of first quarter on lyric poems to sharpen your listening skills; then we move on to longer works. Focused critical essays analyzing passages help you uncover nuance and confront ambiguity. Texts often include the anthology *Beginning with Poems* (ed. Brower); Joyce, *Dubliners*; Shakespeare, *Hamlet*; Fitzgerald, *The Great Gatsby*; Conrad, *Heart of Darkness*; and Walcott, *Omeros*.

## English 12

You are ready to consider the ways literary works relate to one another. You might, for instance, read a number of texts to see how the Romantic era in literature developed into our own. Or you might consider a theme (e.g., the search for an imagined paradise), a theoretical question (e.g., what comic or tragic possibilities are realized when things—societies, language—fall apart), or a genre or an idea (e.g., how the self is constructed in a variety of autobiographies). Each section will have its own list of readings and its own subject to pursue. Courses change from year to year according to teacher and student interests. Texts might include poetry by Wordsworth, Keats, Whitman, Dickinson, Frost, Stevens, Moore, Plath, Bishop, Langston Hughes, and Berryman; Shakespeare plays; Milton, *Paradise Lost*; Swift, *Gulliver’s Travels*; Austen, *Pride and Prejudice*; stories by Hawthorne and others; Hardy, *Tess of the D’Urbervilles*; Conrad, *The Secret Agent*; Joyce, *Portrait of the Artist as a Young Man*; Forster, *A Passage to India*; Woolf, *To the Lighthouse*; Faulkner, *As I Lay Dying*; Bellow, *Seize the Day*; and Roy, *The God of Small Things*.

### English 12: Reasons for Writing

This class offers you the chance to read and then to write in a variety of forms beyond literary analysis: memoirs, journalism, science writing, and polemics on such topics as climate change. In the spring, you and your classmates will produce a *New Yorker*-like class magazine that is usually distributed to the whole school. Possible readings: a compilation of autobiographical, journalistic, persuasive, and science writing by authors including Milton, Abraham Lincoln, Florence King, Louis Menand, and Steven Pinker; Shakespeare, *Othello*; Milton, *Paradise Lost*; Austen, *Pride and Prejudice*, or Wharton, *The Age of Innocence*; stories by Tolstoy and O’Connor; Stoppard, *The Real Thing*; and Williams, *Style: Toward Clarity and Grace*.

**“By the end of English 10, I had come to realize that we often put too much store in the idea that words have to make immediately obvious, straightforward sense.”**

**“I remember reading Joyce’s *Dubliners*. Whole conversations grew out of a single word. It was gut-wrenching. And it was the first time I had ever felt so engaged and moved by a piece of art.”**

**“Now in English 12, I trust myself enough as a reader to relinquish control and embrace ambiguity. And after reading texts that were informative, elegant, shocking, and beautiful, it was my turn. In writing my personal essay, I found my voice.”**

**“I find fiction writing endlessly mysterious. I’m only beginning to understand some of the most basic techniques my mind uses to write a story.”**

**“Reading stretches my emotional muscles. It can make me laugh and cry... feel angry, happy, tense, relieved, disturbed, soothed, exhilarated, or calm. And I’m better for the workout!”**



**“I’d be willing to argue that the best stories are those in which, each time a solution is uncovered, the reader becomes aware of more problems.”**

## Fiction Writing

**E** Picasso said, “Art is the lie that tells the truth”; in this course we’ll be trying to figure out what he meant. Our primary strategy will be to analyze various forms of successful (and perhaps less successful) storytelling and meaning-making, including your own and your classmates’. Frequent workshops will allow you and your classmates to articulate (kindly) what works and what doesn’t in each other’s writing.

## Modernism

**E** We are said to be in a post-modern culture, or even a post-post-modern culture. But what is or was “modern” culture, particularly in literature? We’ll explore that question by reading some of the most radical and influential modernist works of fiction and poetry written in English. Likely reading includes James Joyce, *Portrait of the Artist as a Young Man*; Virginia Woolf, *Mrs. Dalloway* or *To the Lighthouse*; and William Faulkner, *As I Lay Dying*. In poetry, we will read some French Symbolist work (in translation), then focus most of our attention on poems by T. S. Eliot, particularly *The Waste Land*. We’ll read a smattering of Pound, Moore, Williams, and Stevens as well. The course is aimed at avid, curious readers. There will be a lot of reading, a more modest amount of writing.

## Perfect Monsters: Creation and Its Discontents

**E** The centerpiece of the course is Mary Shelley’s *Frankenstein: The Modern Prometheus*, a creation myth, a tale of scientific audacity and would-be perfectionism, a morality tale, a creepy horror story, and the story of the consummate “outsider.” Other readings include a number of creation stories; Ovid, *Metamorphoses*; Milton, *Paradise Lost*; and some nineteenth-century texts associated with the Gothic, the Romantic, and the Sublime; poems; and short stories. We also view relevant artwork (Paul Fuseli, William Blake, Caspar David Friedrich) and films, including James Whale, *Frankenstein* (1931). Topics we consider include Creation and the Fall; innocence and experience; hope and nostalgia; the noble savage and his dark twin, the savage noble; and science vs. nature. As we read, write, and discuss, we’ll focus our attention on the power of language and its ability (or inability) to draw the line between perfection and monstrosity, which is often perceived as the line between self and other. Is there in fact such a line? Who draws it, or tries to?

## Shakespeare: Language and the Self

**E** In what ways do Shakespeare’s comic characters speak differently from—or similarly to—tragic ones? Can we hear a coherent personality through the tones of disparate sonnets? Do we listen to and judge the voice of a character differently when he or she addresses the audience in soliloquy? What does it tell us that at moments of great emotional complexity, the language of Shakespeare’s characters often becomes rhetorically complex? Think, for example, of Juliet’s elaborate and paradoxical condemnation of Romeo after she learns that he has killed her cousin: “Beautiful tyrant, fiend angelical, / Dove-feathered raven, wolvis-ravens lamb....” We address these and other questions by reading a selection of sonnets and several plays—*Richard II*, *As You Like It*, and *Twelfth Night*—as we explore the relationship between Shakespeare’s language and the variety of “selves” he puts on display. At the same time, we focus our attention on some of the particular features of both Early Modern English and the early modern theater that Shakespeare used to great effect. And as they arise, we’ll seize opportunities to consider modern performances.

## Short Story

If you are a tenth grader interested in creative writing, this course will help you develop a writer’s eye for detail and ear for language. You will read and analyze short stories by a range of authors including Updike, Welty, and O’Connor, and write both prompted pieces and full stories. You will also keep a writer’s journal. In workshop-style class discussions, you and your classmates will share your writing with each other and learn how to offer—and accept—constructive criticism.

# Mathematics

**D**o the angles of all triangles add up to  $180^\circ$ ? How do we know? Has someone actually measured the angles of every possible triangle?

The area of a circle is  $\pi r^2$ . How can an area be a decimal number that goes on forever? Can anyone measure an area *that* accurately? If not, how do we know this formula is correct?

Rate equals distance divided by time. That is what we mean by miles per hour. But what do I mean when I say that I am driving 60 mph *right now*? For instantaneous velocity, no time elapses and my car hasn't moved. So, what is my speedometer telling me?

In studying math at Commonwealth, you will learn the answers to these problems and many others. You will learn to translate real-life situations into mathematical equations and how to construct logical proofs, starting from basic assumptions and arriving at expected *and* surprising results. You will learn how to represent equations with graphs and tables of values and develop intuition about their behaviors. You can study calculus and learn about limits, instantaneous velocity, and precise areas—vital to the study of physics and other sciences. You can also study statistics, which has real-world applications in the sciences, the social sciences, political discourse—and everyday life. If you enjoy challenging your creativity in a competitive environment, you can join our math team as it faces off against groups throughout New England. Regardless of the path you take through our math program, you will learn to think logically, to calculate accurately, and to solve challenging problems.

**“Math at Commonwealth has pushed me to think more deeply, prove everything, and have confidence in myself. Geometry, Algebra 2, Calculus, and Statistics have all taught me that math is a complex way of thinking and a way of understanding our world and the way things work a little more clearly.”**

## Intermediate Algebra

Do you need to work more on your algebra? In Intermediate Algebra you will start by reviewing Algebra 1, with a focus on manipulating variables with confidence and modeling word problems with solvable equations. The course then turns to the start of Algebra 2 with a full study of quadratics, rational expressions, and conic sections. You will not just learn how to do algebra; you will also understand why it works as you develop your mathematical intuition.

## Geometry and Geometry Advanced

More than two thousand years ago Euclid wrote down the foundations of modern geometry in what is probably the most famous math book ever written, *Elements*. What did he get right? What did he get wrong? In Geometry you will study a modern form of Euclid's assumptions and see for yourself what can be proven. This course not only teaches you what is true in geometry but also *why* it is true. The main course focuses on geometric facts and learning to write clear proofs. If you take Geometry Advanced, you will delve into more philosophical aspects of modern mathematics. What does it even mean in mathematics for something to be “true”? Studying hyperbolic geometry will challenge your preconceptions of how the world works and bring you closer to the beauty and mystery of theoretical mathematics.



**“I began to understand that math is about so much more than a bunch of calculations and equations. What fun!”**

**“My freshman year Geometry class was inspiring. Suddenly homework became a ‘choose your own adventure’ story.”**

## Algebra 2/Precalculus and Algebra 2/Precalculus Advanced

Functions do all the heavy lifting in mathematics. In this course, you will learn to manipulate functions and represent them in different ways, from equations and tables of values to graphs. You will also study the basic panoply of common functions, from the steadfast polynomial to the transcendentals: exponential, logarithmic, and trigonometric functions. You will learn about these building blocks and how to transform and combine them into new and wonderful conglomerates. With these analytic tools in hand, you will also study conic sections, systems of equations, and (time permitting) matrices and probability.

## Calculus 1 and Calculus 1 Advanced

**AP** Algebra is the study of functions; Calculus is the study of how functions change. In Calculus you will learn about derivatives, what mathematicians call instantaneous rates of change: how fast an object is falling at any given time or how fast a radioactive substance is decaying (what is a half-life?). You will also study going in the other direction: if you know exactly what velocity you've been traveling at any given moment, how do you figure out how far you've gone? Calculus 1 focuses on the theory behind calculus and real-world applications. It will prepare you for the Advanced Placement Calculus AB exam. Calculus 1 Advanced covers more advanced applications and shows proofs with more rigor.

## Calculus 2

**E AP** Here's your chance to take what you learned in Calculus, master all the details, and then extend those results to such applications as calculating arc length and the surface area of a solid of rotation and to calculate for parametric and polar functions. You'll learn to anti-differentiate more complicated functions and then study infinite sums. The terms get smaller, yet there get to be more and more of them. How can you tell whether an infinite sum will stay bounded or explode? This course will prepare you for the Advanced Placement Calculus BC exam.

## Calculus 2 Multivariable

**E AP** After a review of single-variable calculus, you'll cover infinite sequences and series. As in Calculus 2, you'll learn to distinguish those that come to a limit from those that "diverge" to infinity. In the second semester, you will encounter multivariable calculus. Instead of derivatives, you'll learn about partial derivatives. From the single-variable integral, you'll turn to vector functions, line integrals, and double—and even triple—integrals. If time permits, you'll learn about the mysteries of Lagrange Multipliers and Green's and Stokes' Theorems. This course also prepares you for the Advanced Placement Calculus BC exam.

## Theoretical Calculus

**E AP** Knowing how calculus works isn't enough? What do the real numbers have that the rational numbers don't? Theoretical Calculus develops all the theorems of calculus from the axioms of the Real Numbers, including the elusive Completeness Axiom. Enter the world of suprema and infima, follow the partition definition of definite integrals, and revisit old friends such as the Fundamental Theorem of Calculus. When you're done with the basics, you'll use these same methods to investigate infinite sequences and series of numbers and infinite polynomials. You'll end with an introduction to the beautiful theory of complex power series, including a quick proof of the famous Euler equation,  $e^{i\pi} + 1 = 0$ . Theoretical Calculus is equivalent to an Introduction to Real Analysis course in college. Some of the easier material will prepare you for the Advanced Placement Calculus BC exam.

**“Some of the most thorough answers—to my surprise—came out of disagreements that led to a clearer picture of what was going on!”**

**“The homework provided a necessary backdrop, but it was in my calculus classes that explanations came together and made me want to delve deeper.”**

**“Commonwealth teaches what I call real math. And knowing what real math is like before I start college is probably going to make me a math major.”**

## Abstract Algebra

**E** Abstract Algebra is the purest of pure math courses. In this challenging, college-level elective, you will study the most fundamental of mathematical objects: groups, rings, and fields. Are there other “number” systems that mimic certain properties of the real numbers? In what ways are they the same, and in what ways do they differ? In this course, you will discover the solutions to some long-time geometric puzzles: Can one construct a cube of volume two or trisect a given angle using a compass and straightedge? You will hone your abstract mathematical skills and your ability to write clear and effective proofs.

## Linear Algebra

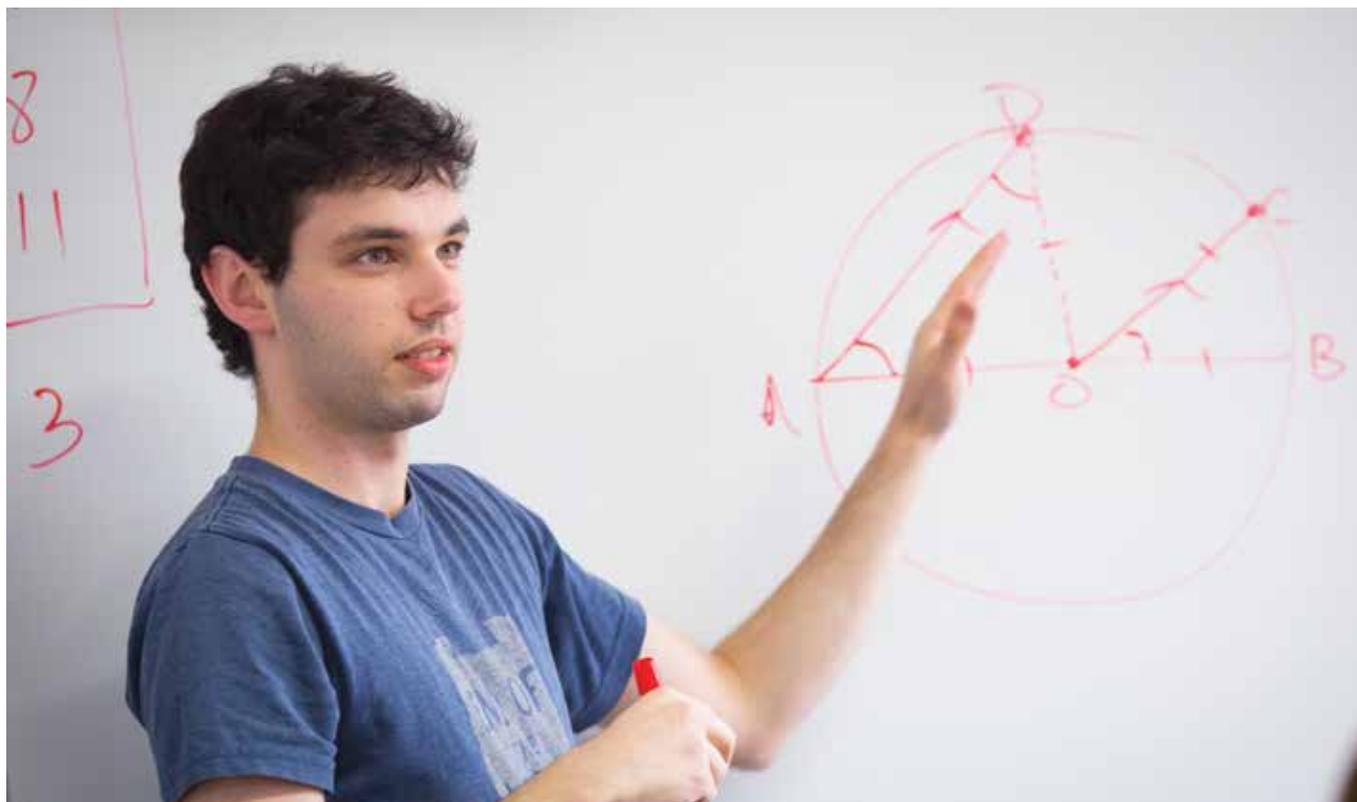
**E** By the time you are ready to take this course, you will already have learned what vectors and matrices are and how to manipulate them. We follow an axiomatic approach to arrive at a deeper understanding of how and why they work. What is the determinant, and how is it characterized? What does a “change of basis” mean (what is a “basis,” anyway?), and why would you want to change one? This class is for budding mathematicians and those curious to know what the world of theoretical math is all about.

## Statistics

**E AP** How can you tell that a phenomenon is random, and what does that mean? When the newspaper reports a poll with  $\pm 3\%$  after it, what exactly does that  $\pm 3\%$  signify? When drug companies claim that a drug will help you, how do they know, and why do scientists often change their minds later? Statistics is the study of random phenomena. In this class, you will learn how to design a study that will give you good data, how to describe the data accurately, and how to use inference to derive appropriate conclusions. The half-credit elective course moves quickly and prepares you for the Statistics Advanced Placement test. The full-credit course covers the same material but at a more deliberate pace.

**“I’m good at math so I’d always felt that I was essentially learning the material on my own. But being in advanced math classes here added more than I could possibly have learned working by myself.”**

**“Perhaps what surprised me the most during my project month at Harvard Medical School’s Department of Global Health and Social Medicine was that statistical analysis is a fundamental part of doing research in social medicine.”**



# Sciences

**“Science is my favorite course every year, and after the first week of school, every year, I find myself swearing, ‘I’ll be a biologist! I’m going to be a chemist!’ This year, it’s, ‘I’ll certainly go into physics!’”**



**D**uring your time at Commonwealth, you’ll study biology, chemistry, and physics, all of which are graduation requirements. But the level to which you pursue these disciplines is a choice you make with your teachers and advisor. You’ll find that the sequencing of your science courses dovetails with your math courses—as you hone your algebra skills, you’ll be using them in chemistry; in physics, you’ll apply the calculus you’re learning to physical problems.

In all classes, you’ll find that the approach to the work is “minds on” and “hands on”: we train you to think like research scientists.

You will gain both a solid conceptual understanding of the workings of the physical world and a repertory of laboratory skills that will inspire you to ask important questions, conceive new ones, and address (and solve) unfamiliar problems.

**“Analytical thinking is the name of the game.”**

Do you have lofty scientific ambitions? You’ll find tough, college-level courses to attract you. Is your math training a bit weak? You will likely start out in a science section that helps fill in any gaps. Are you and a few friends passionate about a particular subject? Lobby your teacher, work together, and there’s a good chance you’ll be enrolled in a challenging new seminar the following fall.

**“We learn to look at the patterns, the ‘why.’ Maybe we’ll forget everything we learned in class—all the facts, all the formulas, all the little details—but we’ll always have that spirit of inquiry.”**

For any science we teach at Commonwealth, and in any field that interests you, opportunities to pursue your curiosity abound in Boston. Our own science team enters competitions; you can easily attend lectures and workshops (sometimes with your whole class) at surrounding universities. We help you find internships at university or industry labs or the Museum of Science during Project Week or the summer break. For a couple of students each year, these science experiences develop into longer, more intense, multi-summer internships. Or your project may turn into a submission to the Siemens Competition or the Intel Science Talent Search. (In the past few years, Intel has named three Commonwealth students semi-finalists.) And for those of you who like working with younger children, teaching interns and volunteer tutors are always needed in local grade and high schools.

## Laboratory Exercises

These form an integral part of our science courses. As researchers in training, you begin with a question. With a lab partner or as a group, you usually design and execute your own experiments to probe and (we hope) answer the question posed. You learn to think, analyze, read, and write like scientists: you peruse scientific papers and reviews and learn to communicate your own findings persuasively both orally and in writing.

## BIOLOGY

**B**iology is the study of all aspects of living organisms; as such, it is the broadest and most diverse of all sciences. The great news about studying biology is that as much as is known, there’s always more to figure out.

**“I learned that sometimes figuring out why an experiment failed and designing a better method is the most interesting part of research.”**

The questions that we ask, and those that working scientists ask, include: How do different organisms solve common problems, like obtaining food, finding mates, and making new life? What's the biology behind how we look and behave? What role do genetics, chance, and the environment play in our lives? How do we interact with members of our own species, and with other species?

The basis of all new knowledge in science is experiment, and we devote considerable time in class both to learning about and doing experiments. What can we figure out by careful observation? What if we were to make changes in a system?

**“What could be more important than the study of life? Life is everywhere, from the trees out on the street to the ducks in the pond, to the mold growing on yesterday’s dinner. One cannot lead an educated life, I believe, without understanding the miracle of life.”**

## Biology 1

Humans are organisms. We interact with other organisms constantly in ways that may not be obvious at first: brushing our teeth, selecting our food, deciding where and how we choose to live. When we begin to examine our environments closely, we become aware of the diversity in form and function of organisms that populate the natural world. We come to appreciate as well that many of these organisms raise biological questions about ourselves and the ways in which we are remarkably similar to, yet decidedly different from, many other forms of life.

Our course materials incorporate a textbook, online reading, animations, and research using both primary scientific literature and summaries of research reports. In addition, weekly laboratory sessions allow us to run experiments and look closely at material we have been discussing. For example, when we examine the properties of stem cells and regeneration, we test the regenerative properties of Planaria through experimentation and observation.

Because we are engaging in such a broad discipline, in-class discussions can range from the evolution of cells to the importance of the bacteria living symbiotically in the human gut, to the various positions people take on the use and release of genetically modified organisms. And at some point during the year, every breaking story in the biological world becomes part of our conversation.

## Biology 2 Advanced

**E** Did you know that you can map the genes in mold spores? That you can make bacteria glow green? Or that our ear bones were jaw bones in our ancestors? If you like to observe and think about the world around you, you'll love Biology 2, where we apply in-depth knowledge of underlying biological processes and enjoy the hands-on approach of lab exercises to learn how to think scientifically and to appreciate that our work as scientists lies beyond just memorizing facts and listing vocabulary (although it's true that you will learn many facts and a lot of vocabulary!).

This course is all about forging a link between making observations and asking questions about what you see. We'll investigate a number of apparent puzzles: Why do some forests have many pine trees, while others have almost none? What makes a cell develop into a muscle cell, instead of a nerve cell or a bone cell? And how do cells know which genes to express, anyway?

We cover a wide variety of topics and material, from molecules to biomes, all the while focusing on incisive inquiry. Though what we ask can be very specific, the answers we find aren't always straightforward. Moreover, asking good questions requires us not only to be skeptical about current theories, but also to take a look at previous experiments that gave rise to current theories.

The textbook we use (Raven et al., *Biology*, 9<sup>th</sup> edition) is recommended for introductory college students and for AP courses; we supplement the text with research articles, essays, and popular science writing.

**“I found that virtually every single detail I had learned in Biology 1 was relevant to the work I did during my project at the Whitehead Institute.”**

**“Now that I’ve taken Bio 2, I will always ask ‘Why?’ For example, why is the fruit fly attracted to the fermenting yeast and not to the fruit itself? My growing knowledge of biology helps me to understand the world better.”**

**“Biology is really a very humbling science. Never again will I be able to see a living thing without thinking about its inner workings.”**

### Advanced Topics in Anatomy and Physiology

**E** Wiggle your finger. Now take a moment to think about all the steps and all the components involved in even something that simple: the command in your brain (or the reflex that bypasses it!); the nerve cells that carry and relay signals down your arm; the cells that insulate those nerves so the signal moves faster; the chemical spark from nerve to muscle; the molecular ratcheting that makes muscles contract and release. Each part is built for its job, shaped and structured in order to serve its purpose.

Our whole body is built of these sorts of remarkable assemblies of cells, with structure rigorously tied to function. How do the forms of biological structures lead to their functions—and vice versa? These are the kinds of relationships we explore in cells, tissues, organs, and systems.

Although we mostly consider human anatomy and physiology, there are times when other animals provide interesting examples, and so we digress once in a while. Along the way, you will see how these systems allow animals to carry out an impressive assortment of actions—from climbing stairs, to digesting a meal, to contemplating calculus.

### Environmental Studies: Problems and Solutions

**E** Food production. Energy use. Biodiversity. The production, use, and disposal of plastic. Climate change. Our society will be able to resolve these broad, pressing problems only if we can gain an objective understanding of human impacts on the environment. To this end, we adopt a scientific approach, using the tools of environmental analysis to consider timely, often controversial questions: How accurately can researchers predict the impact of introducing a new species into an ecosystem? What are the potential consequences of the spread of pesticide resistance genes beyond agricultural systems? To what extent can human communities prepare for global climate change, and what may be the effect of the consequences we cannot prepare for?

Through readings, discussions in class, and independent projects, we look at the effects of human interactions on our physical surroundings and investigate the underlying scientific and historical factors that contribute to today’s ongoing environmental crises. Then we study innovative and creative proposals aimed at addressing these critical issues. With our growing knowledge of environmental science, we evaluate the likely success of each plan of action.

## CHEMISTRY

**W**hy are some substances liquids at room temperature while others are solids and yet others are gases? What is the green substance that appears on copper pipes, and why is it green? How does hemoglobin deliver oxygen to our organs? How does the increase in carbon dioxide in the atmosphere shift chemical equilibria in the oceans? Why does increasing temperature cause reactions to proceed more quickly? Why do diamond and graphene have such different properties?

As chemists, these are the sorts of questions we ask. Our major goal is to understand how the macroscopic behavior and physical properties of different substances connect back to the underlying atomic-scale interactions between particles. As we learn more about the physical world around us, we also seek to develop equations that allow us to quantify our observations.

**“My ‘thing’ is chemistry...and I love photography. What does photography have to do with chemistry, or with science at all? It’s all about perspective, about interpreting the world. Science and art are about the same thing: take a step back and look at the world in a new way.”**



## Chemistry 1 and Chemistry 1 Advanced

Taking an atoms-first approach, we begin by analyzing the periodic table of the elements. We move from the early concept of atoms as indivisible particles to today's quantum mechanical view. Then, equipped with knowledge about the electronic structure of atoms, we can study the ways in which they bond to form different types of compounds.

As we investigate chemical reactions and explore concepts of solubility, acid-base chemistry, and reduction-oxidation reactions, we also develop a quantitative understanding of chemical reactions. If, for example, I burn a hydrocarbon compound in air, how many grams of carbon dioxide and water can I expect to produce? How much heat? What volume will the carbon dioxide occupy? We also work to explain the physical properties of matter. Why is it, for example, that hydrocarbons are not miscible with water and that carbon dioxide is a gas at room temperature while water is a liquid? If you need more background in math you may opt to take Chemistry 1, which offers a similar curriculum to that of Chemistry 1 Advanced, but our pace is somewhat slower and we take more class time to work on solving problems.

## Chemistry 2 Advanced

**E AP** Now we develop a more nuanced and detailed picture of the chemical world around us. Our study of kinetics allows us to connect our macroscopic observations about the rates of reactions to the underlying chemical mechanisms for the reactions. We begin to see both quantitatively and qualitatively the dynamic chemical equilibria at play in all biological and chemical systems (particularly acid-base and solubility equilibria), how they can be shifted, and how this balance connects to the fundamental thermodynamic relationships between reactants and products. We study how the enthalpic and entropic components of a reaction determine the spontaneity of a reaction. As we explore these fundamental concepts, we simultaneously develop our knowledge of electrochemical reactions, the chemistry of the main-group elements, transition-metal chemistry, and organic chemistry.

Note: Chemistry 1 and 2 Advanced together constitute a first-year college course in general chemistry for science majors. Almost all students take the Chemistry AP exam at the end of the year. Text: Chang, *General Chemistry*, 12<sup>th</sup> edition.

## Organic Chemistry

**E** Historically used to describe the chemistry of living things, the term organic chemistry now refers more generally to the chemistry of carbon. Carbon forms an impressively varied set of compounds with hydrogen, oxygen, and nitrogen (and others). These molecules and the reactions they undergo affect our world in so many ways, from the biochemistry that occurs in our own bodies, to the therapeutic drugs developed by the pharmaceutical industry (often inspired by natural products of plants), to the fuels that run our cars. We will learn about the basic classes of organic reactions. Our focus will be on understanding and predicting the movements of electrons: i.e., the mechanisms that underlie reactions. Once we have developed a toolbox of reactions, we will learn how these can be carried out sequentially to synthesize more complex organic molecules.

During labs, we will learn about techniques used for performing organic reactions; for isolating, purifying, and characterizing products of these reactions; and for isolating important natural products. Chemical analysis is a critical part of the process—how do we know that we have made what we think we've made? As all chemists do, we face the challenge of establishing a connection between the macroscopic and molecular worlds. The tools scientists have developed (infra-red spectroscopy, nuclear magnetic resonance spectroscopy, mass spectrometry) allow us to “see” different parts of chemical structures and, with careful analysis, to uncover the structure of a molecule.

**“The periodic table was a key, a guide to the world—and chemistry brought it to life. The food on my plate, the placemat itself, indeed the air and everything around me were made of these molecules—and chemistry explained them.”**

**“The way we approach things in science here, but in fact in everything else as well: there's guidance when you need it and freedom when you don't, and when all you need is a push in the right direction, there's someone there to help you along.”**

## PHYSICS

**P**hysics is the study of the universe, from the very large to the very small. It begins with the simplest model of a system and, using math as both a language and a tool, builds abstraction upon abstraction, resulting in predictions that can be tested concretely in nature.

Our study of the physical world, investigating as it does both practical and theoretical matters, means asking the Big Questions: What is our place in the cosmos? How did ancient people make such huge scientific advancements with only the most elementary tools? At what point exactly do Newton's laws break down and relativistic effects need to be considered? Should scientific advancement proceed absent moral considerations?

**“In physics, experiments without theory would be just catalogs of observations, and theory without experiments would just be conjecture.”**

### Physics 1

Did you know that the ancient Egyptians measured the circumference of the Earth with astonishing accuracy? In your first days of class you will learn how they did it. From the outset, physics at Commonwealth addresses questions in an experimental setting, where you explore with hands-on demos and labs—we even use our 3D printer to create some of the equipment for our experiments. In this introductory course, we aim to teach both the classical mechanics and modern physics that will give you a launching pad for future physics study.

### Physics 1 Advanced

**AP** We will derive the laws of physics just as Newton did about three hundred years ago—constructing the classical theory of mechanics starting with nothing more than Newton's three laws of motion—and we will do so using the calculus that Newton and Leibniz invented for that purpose. After we convince ourselves (through simple demos) that Newton's laws are true, we launch into the classic tangent-line problem to discuss instantaneous velocity as a derivative. We go on to extend our translational results to rotational dynamics, energy, and momentum. By the spring, you are well prepared for the AP Physics C Mechanics exam.

### Physics 2 Advanced

**E AP** We pick up with electromagnetic theory and—to do it full justice—rigorously explore electricity and magnetism using multivariable calculus. But we don't just work with highflying math; we undertake simple hands-on projects to reinforce concepts and demonstrate principles. For example, we might make a speaker out of nothing more than a wire, a magnet, and a piece of packing tape. Listening to it clearly play music from an iPod gives us a demonstration of the force a current-carrying wire experiences in a magnetic field. Or we might create a mini-motor from a screw, a magnet, and a small battery. As a text, we use *University Physics* by Young and Freedman, the gold standard for college physics courses.

### Advanced Physics Seminar

**E** Do you and some of your classmates feel the need to deepen your knowledge of topics covered in the Physics 1-2 curriculum? Or to explore realms of physics that lie beyond it? You are invited to get together with your instructor to discuss the syllabus for an advanced seminar. With enough interest and commitment on your part, the course will most likely come into existence.

Note: This course is limited to students who have demonstrated particularly strong skills in Physics 1 Advanced or who are enrolled at the same time in Physics 2.

**“Throwing objects became lessons about projectile motion: bumping into a friend while skating, an elastic collision. Physics could explain the things I saw every day.”**

**“Teachers give you the concepts and have you make connections. I think that's the reason we come to care so much about the why and the how of the material.”**



# History

**“History, I’ve concluded, is at its core the celebration of the Human Condition: the small man will hurry through his brief, uneventful (or all-too-eventful) time in the world in a few decades, but two thousand years later a six-year-old boy may marvel at a plaster copy of his remains. (Full disclosure: that boy was me—that day I fell in love with history.) Personally, I find it hard to conceive of anything more beautiful than this connection through time.”**

**T**hroughout the Commonwealth history curriculum, our aim is to inspire your historical imagination.

As you begin to think critically and creatively about how we know what we know about the past, you’ll come to understand the breadth of sources that underpin today’s ideas and institutions. Different civilizations in different eras believe in different “self-evident” truths. In our studies of Western and non-Western societies (including China, Africa, and the Islamic world), we examine both the universal and the particular ways culture and religion have constantly affected politics and daily life.

At Commonwealth, we are extraordinarily fortunate to have access to world-class museums, libraries, university lecture series, and possibilities for research internships that put us in close contact with peoples through time and from across the world.

As a ninth grader, you will learn to describe and analyze a primary source in its historical context—including its bias. By junior year, you will be writing essays that not only evaluate primary sources and events but also incorporate modern historians’ interpretations of them. A series of progressively more challenging research papers—the choice of topics is yours—teaches you how to use the many primary and secondary sources available in our collections of books and digital subscriptions, the nearby Boston Public Library, and university stacks. Your teachers and our librarian will help you navigate these documents, enabling you to familiarize yourself with background materials before you settle on your research question, which, along the way, you will find yourself refining continually.

You and your classmates will emerge as fully independent historical writers, skilled at constructing rigorous and clear historical arguments.

**“At first the huge sourcebook just seemed like a burden for my backpack, but I came to realize it was actually a very heavy zoom lens. With close examination, I could uncover the rhetorical tricks demagogues used to sway crowds, and I could sift through their inflated accounts. The texture and depth of history were revealed to me.”**

## Ancient History

A shard of pottery inscribed with a drinking song; a creation myth; the Bible; court cases; plays by Euripides—how can historians tell us anything about the past from such insufficient sources?

By making you distrust the certainty with which textbooks lay out “facts,” Ancient History at Commonwealth is an excellent introduction to the study of history. In this course, you’ll use primary sources to explore what we think we might know about four civilizations: Egypt, Israel, Greece, and Rome. Primary sources (including the historical writings of Herodotus, Thucydides, and Livy) will introduce you to the nuances of reading between the lines, and will raise complex human questions: Who should rule? What does the good society look like? What is a well-lived life? Does might make right, or are there principles we can point to as universal truths?



**“Reading primary sources in history was a way to cut through the dry tone of a textbook and focus on how people actually felt and what they saw.”**



**“How could the Enlightenment and the invention of sociology, so similar in some respects, be so divergent in their political and social effects? I asked my teacher, who, as she often does, encouraged me to go back to the sources.”**

**“You dive into the Bible, and you read historical facts, and maybe arrive at a few answers. But more than anything, you find more questions.”**

## Medieval World History

The medieval world was an interconnected one: Chinese emperors prized ostrich eggs from Africa; African and European kings wore silks from the East. In *Medieval World History*, we look at how ideas (and diseases) traveled freely on the Silk Road that tied East to West in a time of rich and diverse cultures when East, rather than West, ruled the world.

Primary sources allow us to look at the ways the cultures of China, the Muslim world (including Africa), and Europe viewed one another; how religions developed in response to other religions as well as political necessity; and how evolving technology and economic systems changed cultures. Though we have a textbook, created specifically for this course by a Commonwealth teacher, our main focus remains close reading and in-depth discussion of primary sources, including such classic works as Lao Tzu, *Tao Te Ching*; Dante, *Inferno*; Boccaccio, *Decameron*; the Malian epic *Sundiata*; and *The Incoherence of the Incoherence* by the Muslim philosopher Ibn Rushd.

## U.S. History

**AP** In U.S. History, you will be able to apply the skills developed in Ancient and Medieval World History to questions that face us today: How should America resolve the tension between individual rights and the community? What roles should government and the free market play in the individual pursuit of happiness? Does the legacy of slavery continue to shape our country? How have the actions of individual women and men brought us closer to (or further from) the noble words enshrined in the Declaration of Independence?

In addition to the focus on primary texts (which range from sermons to court cases to advertisements to short stories to inaugural speeches to songs by Tom Lehrer), students evaluate often-competing scholarly articles to practice inserting themselves in the ongoing debates of how to understand the past—and how to use the past to understand the present.

## Bible as History, Bible as Bible

**E** Back in the era of the great empires of the Iron Age, an Egyptian bureaucrat complained to his supervisor about bandits—*habiru*—who lived outside of the imperial system in the foothills of Canaan. Millennia later, historians have begun wondering whether those *habiru* might have been the Hebrews of the Bible—and what that identification might mean to the religion they developed.

This course asks you to use your skills as a reader of primary documents to uncover the competing social and religious concerns revealed by a complex text whose date of completion is in question. You will also use your skills as a responder to language to consider the changing conceptions of God and the problem of suffering, especially as the Israelites were influenced by the Babylonian exile and the Greek ideas of the Hellenistic period.

The last third of the course will examine the Jesus movement and its Jewish and Greek roots, focusing not only on the Christian Bible but also on the Gnostic texts that were excluded from the canon in the second century. Most of the writing of the course will be in the form of biweekly response papers, but the major final project will be an examination—or creation!—of some literary, musical, or artistic interpretation of a Biblical story.

## Black and White in America: Ideas of Race since 1940

**E** Fifty years after the March on Washington, 150 years after the Emancipation Proclamation, 238 years after radical rebels in Philadelphia signed their names to a document declaring that all men are created equal, America is widely seen as a country divided by race. Is it? In what ways? And how can we measure this perception against the

emerging view today that class, not race, has become the major barrier to opportunity in America?

Combining sociology and history, we examine the changing questions different groups of Americans have asked about race, class, and culture since the 1940s—including the thorny issue of how, in succeeding decades, our society has attempted to define and treat the social construct of race. Although we focus on race primarily from the perspective of black Americans, spring semester also looks at how questions of race have been further complicated by changes in American demography since the 1960s. Readings are likely to include *Native Son* (Richard Wright, 1940), *If He Hollers Let Him Go* (Chester Himes, 1945), *Invisible Man* (Ralph Ellison, 1952), *The Fire Next Time* (James Baldwin, 1963), poetry of Gwendolyn Brooks from the '70s and '80s, and more contemporary texts. At the same time, we read works of sociological research, including Michelle Alexander's *The New Jim Crow* (2010). Films we see will likely include *Do the Right Thing* (Spike Lee, 1989) and *Fruitvale Station* (Ryan Coogler, 2013). The course, reading-heavy, writing-light, depends in a major way on your class participation.

### **Empires and Nationalism in the Twentieth Century**

**E** The world of the twentieth century emerged from the ruins of empires. In this class we seek to understand how imperial rule and its collapse shaped later national and sectarian conflict, including instances of ethnic cleansing and genocide.

We begin with a theoretical unit, drawing on such scholars as Ernst Renan, Ernest Gellner, and Benedict Anderson to construct the concepts we will use throughout the year. We then examine in depth four cases: the end of the Ottoman empire and the Armenian genocide of 1915; Bosnia's history from the Ottoman period through the post-Yugoslav wars; the end of the British Raj and the trauma of Partition; and Iraq under Ottoman, British, and American rule (focusing on Sunni-Shia relations).

Each case illuminates the next as we seek to understand how and why neighbors become enemies. Conflicts of this sort often attract simplistic historical thinking, as when journalists and politicians explained the wars in former Yugoslavia as the result of "ancient ethnic hatreds." Through our readings and discussions, you will reach a more sophisticated understanding of how the past shapes the present.

### **History of India**

**E** How can we account for the emergence of India today as a cultural and economic force in the world? The answer to this question lies in the complex, fascinating history of the Indian subcontinent from mythological origins to the present. We start by asking, "What are the influences of Hinduism, Jainism, and Buddhism on the social structure and art of India in antiquity and the Middle Ages? What interactions did medieval India maintain with the civilizations of Persia and Central Asia?" You will meet the charismatic emperor Ashoka, who devoted himself to Buddhist pacifism after a career of bloody conquest, as well as the Mughal emperor Akbar, who brought scholars of all world religions to his court to investigate "What is Truth?"

In the second semester we consider East-West exchanges of culture. European culture had a huge impact on India from the seventeenth to the twentieth centuries; and Indian art and culture permeated the colonial European societies through the British Raj and trade. In our investigation of the Raj, we read the diary of a young British woman who was caught up in the Indian Mutiny of 1857.

We conclude with the period of independence and the partition of Pakistan from India in the late 1940s, and read some of Gandhi's most impassioned speeches. Sources include traditional historical and philosophical texts as well as art, literature (the ancient epic *Ramayana*, and the twentieth-century novella *Untouchable*), and film. We watch excerpts from parallel cinema filmmakers such as Satyajit Ray and Deepa Mehta and kick back with Bollywood films that, perhaps surprisingly, draw deeply from Indian history and tradition.



**"I had always been told that interpretation meant finding the right answer—the only answer. In my Commonwealth history courses, however, I had to learn to welcome ambiguity and paradox."**

**"Wandering around, even sometimes getting lost in unexpected and surprising areas of a foreign country is something worth doing. And you sure can do that in our history electives!"**

**“Modern East Asia took me on an exhilarating tour through time and place, and gave me an authentic taste of Asian culture. It immersed us in a historical ‘story’ that was new to me, and fascinating.”**

**“Studying recent history became relevant not only because it helped me make sense of the present, but also because it made me ask who had written what I was reading and how we can come to know what is true and what is not.”**

**“In studying communism, I had to acknowledge contradictions instead of placing all the information inside a neat little box. And I had to come to terms with the idea that I couldn’t simplify what I was writing about.”**

## History of Modern East Asia

**E** East Asia has become a central political, economic, and cultural power in the contemporary world. But did you know that even into the mid-nineteenth century such a concept seemed impossible to the West? Building on the introduction to China in Medieval History, we trace the history of the two major powers in East Asia—China and Japan—from 1650 to the present. We first look at Japan’s religious roots in Shinto and Buddhism, as well as the political and cultural structures of the Heian and Samurai periods up to 1650. We read the spicy *Pillow Book* of the court lady Sei Shonagon, as well as the dramatic samurai epic *The Tale of the Heike*.

Then we study China and Japan together as they both close off to the West in the eighteenth and nineteenth centuries. What happened when Western colonial powers pressured them to open up again in the nineteenth century? China and Japan took different approaches, which largely account for their successes and failures through the twentieth century. We read the subtle, introspective literary works of early twentieth-century Japanese writers as well as the fiery early writings of the young Mao Zedong to underscore this contrast. As we move across the twentieth century, we explore the roles recent decades through traditional historical accounts as well as literature and classic films such as Ozu’s *Tokyo Story* and Zhang Yimou’s *To Live*. Note: In other years, this course may be reconfigured; History of Japan or, alternately, History of Modern China may be offered.

## Modern European History

**E AP** We examine major themes and events in European history from the late seventeenth century through the 1990s. The questions that drive our study include: What has defined “legitimate” political authority at different points in European history? How have economic and technological developments shaped political and social history? What accounts for the rise and fall of nationalism, fascism, communism, and other “isms”? When and why have European states fought each other, or persecuted groups of their own citizens?

Primary sources provide the basis for class discussion and for most writing assignments. For instance, we use contemporary reactions to the Lisbon Earthquake of 1755 to see how Enlightenment thinkers understood human suffering, and we draw on sources ranging from dissidents’ writings to secret police reports to analyze the revolutions of 1989. Our readings also include a college-level textbook and a variety of scholarly articles. After this class, you will enter college prepared for advanced-level electives in modern European history.

## The Rise and Fall of Communism

**E** Our goal is to understand how communism has functioned as a social and political system. How did one-party regimes claiming Marxist ideals come to power in the Soviet Union, Eastern Europe, China, Cambodia, and North Korea? How did these regimes transform the societies they governed while simultaneously constructing a new hierarchy of privilege? Why did they ultimately lose power in some countries but not in others?

After a brief introduction to Karl Marx and his thought, we explore the rise and fall of communism in the Soviet Union and Eastern Europe. We pay special attention to Yugoslavia, analyzing how the complex interplay of communism and nationalism ultimately led to the state’s collapse. We then survey Maoism in China before turning to the catastrophic history of communist rule in Cambodia and North Korea. Our approach is both top-down (Why did leaders make the choices they did?) and bottom-up (How did ordinary people experience communist rule?).

Throughout the year, we will think and talk not only about each country’s unique experience but also about recurring dynamics (for instance, how regime policies led to mass famine in the USSR, China, and North Korea). We read a wide variety of primary and secondary sources, including memoirs, government documents, and journalists’ writings.

# Languages

**Y**ou'll soon discover that the language you choose to study, whether spoken or classical, spills far beyond the classroom—often in ways that may surprise you. Later, during school-organized exchanges and trips to Spain, France, China, Peru, and Italy, you will have the opportunity to explore the country whose culture, literature, and history are becoming second nature to you.

## MODERN ROMANCE LANGUAGES

**I**magine yourself dropped anywhere in the francophone or Spanish-speaking world after studying three or four years of French or Spanish at Commonwealth.

You can read classical and modern literature as well as newspapers or campaign literature or a mechanical instruction sheet.

You understand movies (with only a few glances at the subtitles) and plays; watch TV and listen to the radio with ease; follow the conversation of people around you.

You hold your own in a dinner-table conversation about art or politics...or trivia. You can win arguments and tell jokes. When you enter a store you have the ready vocabulary to buy whatever you need (a flash drive? a hammer? underwear?).

You can write a shrewd critical analysis of a poem or send a well-phrased thank-you note—or letter of protest or complaint.

## French

From the beginning, we conduct classes wholly in French. You learn grammar and vocabulary from a variety of contexts, and you have the opportunity (usually in French 2 or 3) to participate in our biannual exchange with a high school in Alsace.

Here in Boston, we're lucky. The French Cultural Center, with its library and programs, is just two blocks from the school; the Consulate promotes film and lecture programs all year long; and the MFA, with its incomparable Impressionist collection, sometimes runs French film festivals—as do other movie theaters. It's easy to find French music from Rameau to rap. And there's great French food everywhere!

**“We read a lot; we analyze a lot; we talk a lot; we write a lot. One day in the middle of the year, I suddenly realized that I wasn't even thinking about the fact that I was doing all this in French.”**

### French 1 and 2

Vocabulary, verbs, grammar; vocabulary, verbs, grammar. Within weeks you'll be holding short conversations and reading short texts. Using a college-level textbook, *Deux Mondes*, we cover French grammar in two years. Nightly oral and written homework, exercises and self-evaluations on the web, and (because classes are so small) lots of discussion and debate yield satisfying results: you'll rapidly begin to feel at home in French. Soon we delve into stories, poems, films, newspapers, and magazines. In addition, we investigate aspects of French life—from the arts to politics. Sometimes we make *crêpes* or *mousse au chocolat*. After two years, you'll speak, write, and understand French: you're ready for an AP-level course. *Bonne continuation!*



**“My class at the Alliance Française in Paris the summer I was fifteen included students from a diversity of backgrounds. One day I went to the botanic gardens with a young Spanish classmate. During that walk I learned more about a country I had never visited and a language I had never learned than I would have thought possible. That the French we each had studied could serve as the crucial link in a friendship between me and Maria struck me as amazing and wonderful.”**

**“On the first day of my French exchange I was overwhelmed—feeling rather as if I had been dropped into a foreign film without subtitles. But I soon came to regard Mathilde’s family like my own.”**

**“I had to do a twenty-minute presentation (in French of course!) of a two-minute clip from *Jules et Jim*. In the same way I had previously read books just for the story, I’d always watched movies for plot. So I set out to examine how the filmmaker told the story and what sorts of emotions he conveyed to the viewer through camera angles, lighting, and perspective. Essentially it was close reading with a DVD player. Now I think about all I missed in the movies I saw before!”**



### French 3

**AP** We begin an exploration of classic French literature and plunge into the technically revolutionary French cinema movement known as *la Nouvelle Vague* with films that include Godard, *A Bout de Souffle*. We read novellas and stories—Camus, *L’Etranger*; Perrault, *Contes* (frequently grim seventeenth-century versions of fairy tales you may know from childhood); Baudelaire’s poetry—and we parse songs by Edith Piaf. In other words, you’ll be doing the same sort of close reading and oral and written analysis you’re already used to in your English and history classes. At the same time, we do an in-depth review of grammar using *La Grammaire à l’oeuvre* in class, at home, and on the web, into which we fold work on idiomatic everyday speech.

### French 4 or 5 Conversation

**E AP** You often work in pairs or small groups to do research, create assignments, present topics, and run discussions related to current events and French culture. Since the curriculum caters to your interests, it changes constantly (i.e., you can take this class in consecutive years). We may compare *auteurs* (film directors) and their styles. Or look at *la bouffe* (food): organic and local vs. genetically modified and industrial; cooking styles: family style vs. gastronomy (with tastings!). Taking off from Sartre’s play *Huis Clos* and the idea that “Hell is other people,” we might discuss family relationships and the idea of “the Other.” From there we might transition to “*Black, Blanc, Beur*” and the legacies of immigration from the classic film *The Battle of Algiers* (1966), to *La Haine*, made thirty years later. How were social inequalities addressed—or not—in French politics? What about today? Each unit is articulated around readings, films, music, videos, and whatever else we encounter on our path.

### French 4 or 5 Literature

**E AP** We jump into major literary works from the medieval *Tristan et Iseut* to Proust’s *Combray* or Colette’s *La Chatte*. You can take this course twice because each year the readings change. For example, we might read seventeenth-century plays by Molière or Racine; Voltaire’s just pre-revolutionary *Candide* or Laclos’ thoroughly subversive, darkly comic *Liaisons Dangereuses*; novels by Balzac or Flaubert (almost always *Madame Bovary*). Outside the “hexagone” we may read *Le gone du Chaâba* by Azouz Begag, or Aimé Césaire’s *Cahier d’un retour au pays natal*. Often we’ll see films associated with the novels or plays. According to class interest, we read more or less poetry (often more). We read and write a great deal, and class discussions are frequently fervent and sometimes fiery. Having reached this level of language and literary sophistication, you all argue about texts with great enthusiasm!

## Spanish

We’re surrounded by Spanish in this city, which makes studying the language both an in- and out-of-school adventure. You can take advantage of so many opportunities: performances and exhibits; projects; community service and summer internships. You can sample various national foods; talk to Spanish-speaking schoolmates; and follow Spanish TV broadcasts.

In our courses, you travel beyond Boston as well: literally—with a school exchange to Barcelona after Spanish 2 and a class trip to Peru after Spanish 3—and figuratively, with course content centered on those countries. In spring of their senior year, two or three particularly strong and interested students may opt to spend two months attending our sister school in Barcelona. *Buen viaje!*

**“The fact that we get to go to Spain makes it all very, very exciting!”**

## Spanish 1 and 2

We plunge immediately into the study of the four basic language skills (speaking, reading, writing, comprehension)—no English in class! The college-level textbook, *Dos Mundos*, which we use for two years, is soon supplemented with literary or journalistic texts and videos that give you a glimpse of the vast world of Spanish and Latino culture. In addition, you often write stories and essays, or skits that you present to your class.

In Spanish 2 the main subject of study is Barcelona. The cultural sourcebook (compiled by a Commonwealth Spanish teacher) lets us work with a rich and increasingly sophisticated selection of literary, historical, political, and illustrated art-historical articles. We look at dance and films; we listen to music.

Early in Spanish 2, we also begin preparation for our March trip. You write blogs and correspond with the Spanish student who will be both your guest and your host.

## Spanish 3

**AP Peru!** Our in-house-compiled sourcebook is organized to give you an in-depth review of grammar while you study the history, geography, literature, art, politics, food, and music of this vibrant culture. You have become fluent readers, taking on ambitious texts such as the seventeenth-century writer Inca Garcilosa de la Vega, or the more modern César Vallejo or Mario Vargas Llosa. You read about José María Arguedas and indigenism and even learn a few words of Quechua. In June most years, we take off for two weeks, traveling from Lima to Ica, to see the Oasis of Huacachina and the Ballesta Islands, and then to Cusco, the Sacred Valley, and Machu Picchu.

## Spanish 4 Literature: Latin American Authors

**E AP** Your Spanish is good enough at this level to let you do in Spanish class exactly what you do in English class: close reading and critical analysis, both oral and written. We study the mysterious genre of magical realism that originated across Latin America during the last century. We read stories by García Márquez (Colombia); Borges, Adolfo Bioy Casares, Cortázar (Argentina); Fuentes (Mexico); and Felisberto Hernandez (Uruguay). We also examine how the movement crossed the Atlantic and made its way into films such as *Cria Cuervos* (Carlos Saura) and *El Espiritu de la Colmena* (Victor Erice).

## Spanish 4 or 5 Language

**E** We continue to read, write, discuss, and watch, and you have a say in what we study and how we run the class. We study various Spanish and Latin American movies and literary texts, but the focus of the curriculum changes yearly according to your interests. Individually or in pairs, you will organize a unit, create assignments, and run discussions.

Note: At level 5, this course can be taken with Spanish 5 Literature.

## Spanish 4 or 5 Literature

**E** Some refer to this as “the big, fat novel course.” We delve into the literary movement called the “Latin American boom.” You read, run discussion sessions, and write close analyses of passages from, for example, Gabriel García Márquez’s *Cien años de soledad* (*One Hundred Years of Solitude*) or Manuel Puig’s *El beso de la mujer araña* (*Kiss of the Spiderwoman*). Here, too, student taste helps determine which books we read.

Note: At level 5, this course can be taken with Spanish 5 Language.

“My favorite debate I had with my host family at dinner was about teenagers spending most of their time on social networks rather than doing something educational, like reading a book. And we were arguing in Spanish!”

“After years of working with words that once sounded clunky, when I read Spanish literature now, I think in the language. The same transformation can occur in every discipline. You can learn to think in the language of science or the language of history. When this happens, you see things fit together in a beautiful harmony, and the field belongs to you.”

“Close reading really is ubiquitous at Commonwealth. And being able to do it successfully in my second language, with a beautiful piece of literature, was incredibly satisfying.”



## LATIN

Whether you're walking by the great Romanesque Trinity Church on the way to the T, singing Latin lyrics with the chorus, or entering the BPL under the gaze of Minerva, traces of the Latinate civilization show up in our everyday lives here in Boston. As you study Latin, you'll discover that the most profound influences of Roman civilization are those hiding in plain sight in our own words and the very fabric of our inherited concepts.

By the time you get to Latin 3, you will be reading works of great classical literature, and approaching them with the close reading and analysis skills you have developed in your English and history classes. And to make the past more vivid for you, our school runs a bi-yearly "classics" trip to Italy, where you will study the architectural and artistic remains of Rome and the Bay of Naples (including Pompeii and Herculaneum). We focus not only on the monuments themselves, but also on the ways successive generations of leaders—from feuding medieval families and Renaissance popes to twentieth-century dictators and the modern European Union—have reused and appropriated the glory and grandeur of the ancient world. We also eat a ton of pizza and gelato.

**"The difference between our pace of life and that of Italy was amazing to me. But nothing was more disorienting than the fact that Rome lives both in ancient times and the present. You can walk around among the ruins...on the same paths Roman senators walked. Some of the tombs I saw in museums had been found by farmers digging wells. History was a visible part of everyday life and culture."**

**"When I was applying, I was interviewed by a Latin teacher. He talked about Saturnalia, the famous role-reversal holiday of the Romans, and its relevance to modern religious traditions. I walked away completely convinced that this was the school for me. In fact, I decided on the spot to take Latin the following year."**

**"Though I was not having a good day, I realized that doing Latin with my class would cheer me up far more than most anything else I could do with those forty minutes. Sure enough, I left class feeling buoyed up and refreshed by the lively discussions of folk motifs in Vergil."**

### Latin 1 and 2

In two years, Commonwealth's Latin program completes all the grammar you will need to read the classics of Roman poetry and prose, not to mention medieval and Renaissance literature.

Refusing to be outdone by schoolmates who study "living languages," students from Latin 1 and 2 have been known to sing "The Twelve Days of Christmas" in Latin at our Winter Assembly. From the very start, you will be reading simplified snippets of real Roman literature, and later longer authentic stories, often by authors or about figures you encounter in our Ancient History course. Famous stories include the founding of Rome by Romulus and Remus and the assassination of Julius Caesar. (But do you know who Cincinnatus or the Gracchi were?) We read classic passages by Cicero and Ovid, and snarky poems by Catullus addressed to his lover's husband as well as his literary critics.

Along the way you will also pick up other bits of knowledge—about the history of the Latin language, about the English language, and, just for fun in Latin 2, about how Western languages work in comparison with Eastern ones.

### Latin 3: Caesar's *Gallic War* and Vergil's *Aeneid*

**AP** "*Gallia est omnis divisa in partes tres*": "Gaul is wholly divided into sections—three, in fact." Caesar's oracular opening to his *Gallic War* might be the most famous Latin sentence ever written, but it's curious how Caesar places each word in precisely the least natural position (did you notice the oxymoron that results: "wholly divided"?) and that the record of his military campaigns should begin with some rather deceptive historical geography. He implies that Gaul is not a nation, but merely a word that arbitrarily bundles a few unrelated "sections," each more barbarous than the next. Is he subtly justifying Roman imperialism—not to mention his own boundless ambition?

Fast-forward one generation to Vergil's *Aeneid*, part paean to Augustus, Rome's first emperor, part lamentation on the human cost of empire. Shall we, like Saint Augustine before us, grieve the death of Queen Dido for love of pitiless Aeneas? Or pity Aeneas, the man of grief destined to found the race that will vanquish all nations? Whether the tragedy of star-crossed lovers, or Rome's grim history, the same war in heaven is the cause. This is what we'll discover as we relish the heartbreaking beauty of Rome's national epic.

## Latin 4: Roman Lyric Poetry

**E** By now you've heard of Catullus, the racy Roman poet who inscribed so colorfully on his poems his own riotous life of drinking parties and prostitutes, chronicling his loves and hates in shockingly sordid (and often untranslatable) terms. We'll revel in all his hilariously puerile antics, but always with an eye toward the profound artistic vision underlying this trifling "play." For, as one of the "New Poets," Catullus strove to craft poems of unprecedented perfection and beauty—works that could not be appreciated without scrupulous attention to every word. With the help of the close-reading skills you've developed in your Latin and English classes, you'll detect beneath Catullus' nonchalance about being "dumped" a heart broken by its own vulnerability, and a man in revolt against Roman "manliness," craving in vain to love and be loved—tenderly, devotedly—a self-described "fallen flower, grazed at the meadow's edge by a passing plow." We'll linger for a whole semester on this seminal poet before tracing his enormous influence through the first century B.C.E. in Horace's exquisitely allusive lyrics, Propertius' modernistic elegies, and the sardonic transmutation of Greek mythology in Ovid's *Metamorphoses*.

## Latin 5

**E** For those of you who have advanced beyond Latin 4, we'll put our heads together to design a curriculum that responds to your interests. The possibilities are endless. Has your appetite for poetry been whetted? We could explore a poet of the imperial era, such as Lucan, or one of the Silver Age, such as Statius, or Seneca's plays. Or is prose more your speed? We could delve into Seneca's stoicism, or Pliny's letters to the emperor Trajan. In any case, we'll continue to study the ways classical texts have survived to the present day, honing the skills of the professional philologist, including textual criticism, editing, and manuscript studies.

## MANDARIN

**"Studying Chinese might be hard, but I think it's really important. I want to have the ability to communicate with one-fifth of the population of the earth."**

**Y**ou enter a program of intense listening, speaking, reading, and writing, and you will soon feel comfortable, with your classmates and teacher, making that effort to communicate. Beyond the classroom, our city gives you many opportunities to do so: when you study and visit Chinatown during your City of Boston course, you'll discover that the markets, shops, and restaurants offer a variety of resources for language students. Spring and autumn fairs and New Year's celebrations unfold within walking distance of the school. You can go to the new community center and library or do projects or internships at Acorn, a day care center for Chinese children. A bit farther afield, the MFA and the Sackler Museum house some of the world's best collections of Chinese art. And farther still, you can travel to China on a school trip.

**"Our group visited Beijing and Shanghai and Hangzhou, which were overwhelmingly huge! We had full days with so many adventures—'touristy' maybe, but exciting. We didn't even have time to feel tired! We walked on the Great Wall, visited Tiananmen Square and the Forbidden City, saw amazing temples and museums and a tea plantation. We were also spoiled: we had real Chinese banquets. We took a riverboat cruise; we saw a circus performance. Our guides answered most of our questions, and we even met some kids our age. Thinking back, it's hard to imagine that we did and saw so much in just two weeks."**

**"Taking risks with my own opinion about a passage in Latin became an exciting daily challenge."**



**“The non-alphabetical system is so different. It’s the most difficult part, but it’s the most interesting. The characters can be like a beautiful block.”**

**“Our teacher told us once, ‘If I could airdrop my students into China, I would want them to be able to survive.’ I think if she did that now, we could!”**

## Mandarin 1 and 2

In all Mandarin classes, we work on the four language skills: listening, speaking, reading comprehension, and writing. If you have little or no experience with the language, Mandarin 1 is the course for you. We study Pinyin—the phonetic system of Mandarin Chinese. You will learn to read and write some 120 Chinese characters that form about 150 words. By the end of the first year, you’ll find yourself using greetings properly and talking to classmates about yourselves and your families. You’ll be able to understand and discuss (simply) topics centered around daily life: school life, weather, and shopping.

In Mandarin 2 we further emphasize aural comprehension and oral expression. With support from our textbooks (we start with *Ni Hao*, Vol. 3, and soon move on to the college-level *Integrated Chinese*), you broaden your knowledge of simplified Chinese characters (the system used in mainland China), practicing strokes, stroke order, and radicals. In addition, we read simple poetry and folktales, listen to music, and learn about festivals and holidays. And throughout your Mandarin studies, you get to make and sample extraordinary food.

## Mandarin 3

We take the plunge and conduct the class entirely in Mandarin, continuing to work hard at the requisite four skills. We also incorporate authentic material into the curriculum—short videos (for example, a Chinese sitcom about an American girl in China), Mandarin songs, poems. With classmates, you get to make up and present original skits that deal with everyday problems, from arguments with your parents to explaining your food allergy in a restaurant.

## Mandarin 4

**E** You’ve become fearless enough to try to use the language creatively. Sometimes it doesn’t come out exactly right, but even so, you can be easily understood. We still do intense oral/aural and written drills, but you also hold conversations, present material to others, and talk interpretively about a text, film, or video. And you’ll see results: by the end of the year, when you watch *The Blue Gate*, a film made in Taiwan, you no longer need subtitles. Class discussions often turn to social issues, comparisons of culture, or politics.

## Mandarin 5

**E AP** Offered in years when a sufficient number of advanced students request it. The curriculum is based largely on student interests.

# Computer Science

**C**omputer science is all about problem solving; writing code is a lot like working out a puzzle. It’s a discipline that changes the way you think. It can turn everything you do into a step-by-step challenge. For instance, if you get up late in the morning, you probably ask yourself (even if you’re too sleepy to be aware of the steps): “How can I prioritize my time most efficiently? What is the most important thing I have to do? What will take longest? What can I eliminate to save time?” You’ll find that learning the syntax of a new computer language is not all that different from learning new vocabulary as you study another spoken language.

Not only is computer science fun and intellectually stimulating, it is also the fastest-growing occupation out there. Skilled young programmers are in high demand and will be for the foreseeable future. The tech giants are constantly searching for new talent. The work of computer science is woven into pretty much every field in the “real world”



today—medicine, finance, education, art making, public relations, museum work, business, architecture—the list goes on and on.

In Boston we are extremely lucky to live in one of the great technology hubs of the nation. If you're an enthusiastic computer science student, you'll have matchless opportunities to land projects with innovative companies. Often these can turn into well-paying summer jobs or evolve into long-lasting internships.

### Computer Science 1: Introduction To Programming

**E** Jump into programming with the language Python. We focus on Python because it's the language that's as close to English as you can get, and it's intuitive—a perfect place to begin your programming experience. Our class covers the syntax of Python, common problem-solving techniques, and the major concepts of programming: decision structures, looping techniques, and functional programming. If you're the kind of person who likes puzzles and can't let a problem go until you solve it, computer science is a good field for you. After the challenge of writing your own card game, you will write your own video game in Python for your final project. Once you finish this course you will be able to learn new languages and new programming paradigms quickly, and you'll be problem solving like a computer scientist.

### Computer Science 2: Introduction to Object-Oriented Programming

**E AP** You'll find that you view problems differently after the first computer science course you take. Our study of object-oriented programming (OOP) starts at the end of October. Before introducing the complicated topics of OOP, however, you must first have a working knowledge of Java. Knowing Python helps immensely in learning Java, since you already understand how the common programming structures work. Java is the language most used in industry, in part because it is the most "portable" language—its implementation is the same, regardless of the platform you are running it on. (You can get a job knowing only Java.) Moreover, you will find it extremely adaptable. Once you've mastered Java, you can learn other languages easily. At the end of the year, you will be well prepared for the Computer Science AP exam.

### Computer Science 3: Data Structures and Algorithms

**E** We cover Data Structures and Algorithms in Java for this course. You'll find that we've been using many of these data structures (lists, for example), since day one of Computer Science 1. Now you have the chance to dig into the meat of the data structures. By building them ourselves during first semester, we come to a deep and practical understanding of the theory of data structures and how they work in different implementations. We begin second semester by analyzing the efficiency of each data structure we built over the course of first semester. We then move on to analyzing other common problem-solving tactics and common algorithms used in programming.

### Computer Science 4

**E** After the first three years of computer science studies, you will have enough experience to be able to pick a challenging problem that interests you and to work on it independently. So in this class, your various interests essentially determine the course content—and that does not necessarily mean that you all work on the same material! One possible curriculum would be the following: We embark on an introduction to mobile app development, building Android apps using MIT's App Inventor and moving on to build more complicated apps using Android SDK. As your final project for first semester, you design a Commonwealth-specific app that students with Android smartphones would want to use. Second semester, you learn C++. With this language, you build Apple apps using Apple's Xcode, and you devise a final project involving iPhone apps.

**“I find the approaches and habits that go with the constraints of different computer languages to be a fascinating part of the thought behind programming. My research indicated that Haskell is an excellent language for someone who wants an immersion in functional thinking, and I think it's beautiful to people who get along well with the mathematical and the logical.”**

**“The Computers 3 class is literally students working together to write data structures. It's the definition of engagement and cooperation.”**

# Humanities and Social Sciences

**H**ave you ever wondered how movies “work” to manipulate the audience or exactly what music does to “grab” the listener? Did a trip to the MFA when you were in grade school inspire you with a lifelong love of impressionist painting? Have discussions about the rise of cryptocurrencies like Bitcoin made you want to know more about how economies work? Or maybe you’d like to learn more about how to think through upcoming arguments in the Supreme Court.

We hope that the discussions, readings, and research you enjoy in your core courses will trigger your imagination in many directions. To help satisfy your curiosity, we offer a broad and changing selection of electives in the humanities and social sciences. Often, we will add new courses to the curriculum in response to students’ and teachers’ interests.

## ART HISTORY

### Nineteenth-Century Painting (mainly French)

#### Late Nineteenth- and Early Twentieth-Century French and American Painting

**E** We offer these courses in alternate years, so you can take both of them if you wish, in the order that suits your schedule.

Every class begins with an image of a work of art, projected on a screen. Or perhaps we zoom in on just a detail—say, the hand from Jacques-Louis David’s portrait of the government official Marat, gruesomely murdered in his bathtub, but firmly holding a pen as if he were still doing his civic duty. Major ideas emerge from such details—not from lectures or general surveys, but rather from what you observe and how you respond, and from lively exchanges with your classmates. Similarly, you will write most of your essays in class, basing them on your own first-hand experience of paintings you’ve never seen before. In looking closely at a painting’s details, colors, composition, and brushwork, you will begin to build a coherent interpretation.

**“I came to realize that painting is not just an exercise in color and texture. Ultimately, these works of art reflect on our very own existence, our very lives.”**

Your confidence in your eye and critical judgment will grow. Examining several works by a particular artist, you will make imaginative connections. In this way, you’ll be able to work toward a larger understanding of an artist’s whole career and his contribution to the development of art in his own period and beyond. Studying the period covered by the two art history courses reveals revolutionary transformations in styles of painting. In the nineteenth-century course you begin with the crisp, controlled geometry of David’s classical heroic scenes, arranged as if on a stage. In the middle of the year you encounter the Romantic artists’ unleashing of wild energy in humans, beasts, and the natural world in compositions that seem ready to explode. What is happening in the artists’ imaginations and in the world that would account for such a change? You will look for answers to this question in the paintings themselves, as well as in the artists’ own words in their letters and journals. Beyond slides and books we consult at school, you will get to know Boston’s great collections of paintings and write about some of the works of art in them.



**“One day in English class we arrived at that moment in Wordsworth’s *Prelude* where he is hanging alone ‘above the raven’s nest...on [that] perilous ridge...’ I saw it before me not as mere words, but as the subject of a Romantic painting. It seemed that the whole of what I had been studying in intellectual history, English, and art history fused together in that one moment, all the ‘discordant elements... reconciled.’”**

## FILM ANALYSIS

Living in an age of glitzy special effects and post-postmodern mixing and matching, we are often seduced into passive viewing. These courses will remind you that watching a film well requires as much energy and focus as studying a novel. “Close reading” in class discussions and your written and oral analyses teaches you that how you see in fact determines what you see. We examine carefully how our responses are elicited by the director’s art and craft. What decisions has he made regarding *mise-en-scène* (what’s in the shot) and *montage* (how the shots are stitched together)? You’ll witness the powerful effects of directorial choice: for example, shocking editorial juxtapositions created by the surrealists; deep focus in Welles’s *Citizen Kane*; camera angle in Ozu’s oddly steadfast, meditative floor-level shots; close-ups, intense and unrelenting in Dreyer; and sets in the darkly theatrical decor of *The Cabinet of Dr. Caligari*. You’ll see a number of first attempts at style, content, and form—often rough, always bold, they supply a rich context for what followed.

Note: We offer two courses in alternate years, so you can take both of them if you wish, in the order that suits your schedule.

### American Film

Starting with the talkies, we look at American history and the country’s psyche through the lens of its films. We spend first semester and part of second watching seminal examples of distinctively American genres—the Gangster Film, the Western, the Musical Film, the Screwball Comedy, Film Noir, etc. Depending on your particular interests, we may also view more recent films that may be seen as critiques, revisions, and homages made in response to their forerunners. During the final part of the year, you will undertake an independent project on a film, style, genre, or director of your choosing. Films viewed often include: *Scarface* (Hawks, 1932); *Swing Time* (Stevens, 1936); *Gold Diggers of 1933* (Leroy, 1933); *Fury* (Lang, 1936); *Cat People* (Tourneur, 1942); *Stagecoach* (Ford, 1939); *Citizen Kane* (Welles, 1941); *Double Indemnity* (Wilder, 1944); *To Be Or Not To Be* (Lubitsch, 1942); *The Best Years of Our Lives* (Wyler, 1946); *Letter from an Unknown Woman* (Ophuls, 1948); *On the Waterfront* (Kazan, 1954); *Paths of Glory* (Kubrick, 1957); *Vertigo* (Hitchcock, 1958).

### World Cinema: From *The Cabinet of Dr. Caligari* to *Psycho*

We begin the year in European silent films of the 1920s and work our way through nearly five decades of world cinema. As always, close reading gives us the means to see how directorial choices create effects and determine our responses. We can thus examine big and small similarities and differences across time and space. Starting with Wiene’s *The Cabinet of Dr. Caligari* (1919), and ending with Hitchcock’s *Psycho*, we choose among the masterpieces of the following directors: Eisenstein, Dreyer, Lang, Dali and Buñuel, Vigo, Murnau, Renoir, Rossellini, Welles, Ozu, Kurosawa, Mizoguchi, Fellini, Ray, Bergman, Truffaut, and Godard.

## JAZZ THEORY

### Jazz Theory 1

Jazz music can be deeply instinctive or intensely cerebral—sometimes both at once. When listening to the shifting chord changes of Duke Ellington’s “Caravan” or the abstract ensemble improvisations of late-era Coltrane, have you ever wondered how it all hangs together? Beginning with Jazz Theory 1 you can find out. We combine close listening to jazz performances with learning basic music theory: notation, ear-training, harmony, and music theory allow you to grasp concepts of improvisation. You will become a literate musician. As you come to understand more fully what you hear, you also gain a historical overview of jazz and how great jazz performers work. This gives you the opportunity to define your own role in a jazz group—which is helpful since every student in Jazz Theory must take Jazz Ensemble as well. Most work is done in class, including exploring concepts on your instrument.

“I never thought that old black and white films could be so visually exciting. We learned to notice all the techniques directors use to manipulate us as viewers. In those days ‘special effects’ might have meant just digging a hole in the floor, but they were incredibly effective.”

“Our teacher takes time to develop our individual abilities according to what we need most—be it simple ear training, improvement through practice, or composing. And as a bonus, in Jazz Ensemble we get to perform with well-known guest artists.”



**“I found myself grappling with the question of whether Affirmative Action violates the Constitution, even if the ideals behind it do not.”**

**“It was fun to study cases in which our teacher had represented the defendant, especially when we discussed questions and problems that arise in patent law.”**

## Jazz Theory Advanced

**E** As you advance your understanding of jazz theory (you can take this class for up to four years), you will become increasingly knowledgeable and adept at listening, playing, analyzing, and composing. We do intense ear-training and study harmony, nomenclature, and writing jazz notation. More advanced classes include jazz arranging and jazz composition. All the way through, we emphasize playing what you learn and incorporating your skills into performance situations—such as Jazz Ensemble!

## LAW

### Constitutional Law

**E** Basing its rulings on the principles of Constitutional Law, the Supreme Court makes the ultimate decisions on many of the nation’s biggest social and political issues. We read some of the leading Supreme Court opinions, with a focus on questions of equality and social justice. On the practical side, you will get a feel for what lawyers and judges actually do, by arguing cases yourself—in class and in our “moot court” event in May.

During the first semester, we examine the structure of the Constitution itself and study a series of prominent Supreme Court cases that established the principle of judicial review of acts of Congress, clarified the powers of the federal government over interstate commerce, and resolved key political battles concerning social welfare legislation. We analyze different modes of constitutional interpretation and examine the relationship between the Court and historical events. We ask ourselves as well: How do we judge the role the Court has played at these significant moments? Have its decisions simply reflected the times? Perhaps led the charge? Or, perhaps, held back progress?

In the second semester, we focus on social justice and the Court’s role in cases relating to such matters as freedom of speech and religion, race discrimination and affirmative action, reproductive freedom, gun control, the rights of criminal defendants, and marriage equality. And given the importance of dissenting opinions in the Supreme Court’s history, you’ll learn how to argue from multiple perspectives.

### Intellectual Property Law

**E** Can you patent human genes? If you parody a popular song, is it free speech or copyright infringement? From billion-dollar verdicts to everyday activities that students might engage in (such as Internet file-sharing), the role intellectual property law plays in our economy and society has never been greater. In this course, we survey legal principles and recent developments in intellectual property law, focusing on patents (which grant inventors a limited monopoly to make, use, or sell their inventions), copyrights (which protect works of authorship such as books, film, or music), and trademarks (which protect words or symbols used to distinguish one’s products or services from those of others).

We also cover issues such as “fair use,” Internet domain-name disputes, click-to-agree contracts, trade secrets, parody, and cyberlaw. You’ll get a chance to examine the philosophical, economic, and policy underpinnings behind intellectual property rights and consider how the law keeps up (or doesn’t) with technological advances. You also get to visit a real-life courtroom, and practice being a lawyer in the “moot court” we conduct in the spring. Because no prior knowledge of law or the legal system is required, the course begins with an overview of the American legal system: three years of law school condensed into three weeks.

## MUSIC THEORY

### Music Theory 1 and 2

**E** We study notation, music history, rhythm, pitch, and intervals. You’ll do formal analysis and four-part writing, including secondary dominants and modulation. Heavy emphasis

on ear training and *solfège* teaches you to listen. Music, like any language, is a system; understanding how it's put together helps you comprehend—analytically and therefore more pleasurably—any kind of music and notice correspondences between different styles of music. In the second year, we deepen our structural and formal analysis of music and do more sophisticated ear training and composition exercises. Often students are ready to take the music theory AP by the conclusion of this course. All members of both classes must also join either orchestra or chorus.

### Music Theory 3

**E AP** We study scores intensively—especially those from the classical symphonic literature. You may also study conducting. All members of the class must also join either orchestra or chorus.

### Music Theory Advanced: Seminar in Conducting and Advanced Theory

**E** This course is for those of you who have completed the school's music-theory sequence and have scored a minimum of 4 on the music theory AP exam. We study basic and complex beat patterns and independence of hand gestures as we continue with advanced ear training and score analysis. You will discover ways to use physical gestures to mold individual phrases and to weave them into a unified whole. The goal is for you to learn the skills that will enable you to conduct the chorus or the orchestra during a rehearsal or performance in the spring.

### Independent Seminar

In extraordinary cases, by permission of the teacher and the faculty, independent study seminars are given in conducting, *solfège*, analysis, etc.

## ADDITIONAL COURSES

### Economics

**E AP** Why aren't rent controls efficient? What exactly is bad about monopolies? Is the free market truly the best economic system? What does the Federal Reserve Bank do?

In Economics you examine these questions and many others. In the first semester, we will study the law of supply and demand, market structures such as perfect competition and monopoly, and both the extraordinary efficiencies and the inefficiencies of the free market. In the second semester, we will turn to the economy as a whole. What is GDP? How do we ensure economic growth, low unemployment, and low inflation? Can we actually do this? We will study fiscal policy such as stimulus spending and tax policy and monetary policy, those mysterious actions by the Federal Reserve. This course will prepare you for both the Microeconomics and Macroeconomics Advanced Placement tests.

### Greek Tragedy and Its Legacy

**E** What is justice? Are there absolute ethical standards, or do moral principles always promote the interests of those who formulate them? How is it that discourse can so effectively conceal—or distort, or invent—truth? Will human nature respond to reason, or is the psyche moved only by the seduction of its own passions—and the flattery of clever speakers? Is a society founded on persuasion, i.e. democracy, especially prone to self-deception and destruction? These are some of the questions we will encounter in the works of Aeschylus, Sophocles, and Euripides, the great tragic poets of the fifth century B.C.E. As we read closely a number of their plays, we will consider how the genre of tragedy as such responded to the cultural dislocations caused by the intellectual revolution and unprecedented horrors of the Peloponnesian War (431-404 B.C.E.). Then we'll observe the influence of tragedy on Thucydides, reading his history of this disastrous conflict precisely as the tragedy of Athens'

**“If you're interested in theory, the level of your musical background doesn't matter. The program here can take people at any level and bring their theory to an AP level in just two years.”**

**“We learned concepts that explain how decisions are made and prices are set. Money makes the world go 'round, and studying economics helped me understand why and how.”**

**“This course changed the way I examine society. We analyzed sociology, history, political science, mythology, and philosophy in our discoveries—deep in the smooth and delightful subtleties of Greek literature. Some of the texts we read still haunt me (in a good way!).”**

willful and self-destructive folly. Finally, we'll explore Plato's literary and intellectual debt to tragedy, taking as our cue the philosopher's decision to present his ideas in the form of fictional dialogues set, significantly, during the Peloponnesian War. Texts include Aeschylus' *Oresteia*, Sophocles' *Oedipus the King*, Euripides' *Bacchae*, Thucydides' *Histories*, and the *Gorgias*, *Symposium*, and *Phaedrus* of Plato.

**“We juggled literary devices, hidden criticism of Russia, and philosophical issues, especially the nature of consciousness. I had to write a philosophy paper by citing and interpreting fiction, all while keeping in mind the time when the book was written. The combination of disciplines somehow made perfect sense to me.”**

### Russian Thought and Literature

**E** How did the Russian literary tradition respond to currents in Russian society? We look at the rise of socialism and Slavic nationalism, the resurgence of Orthodox Christianity, and the alienation of the upper classes from “the people.” After reading Pushkin's effervescent *Eugene Onegin*, we move on to some of Gogol's grotesques, including a story about a runaway nose that impersonates a high-ranking official. Then we devote a good while to Dostoyevsky, *Notes from Underground*, a disturbingly hilarious novel about spite and self-loathing; Tolstoy, *The Death of Ivan Illych*, an account of the slow, anguished death of a mediocre man, and his *Kreutzer Sonata*, which entertains the theory that human society is founded on sexual exploitation.

Thereafter, we explore various modernist works, including the exquisitely humanistic stories of Chekhov; Sologub's disquieting tales; and Zamyatin, *We*, the 1921 dystopia that inspired Orwell's *1984*. As we make our way into the twentieth century, we'll also keep an eye on related developments in other arts, viewing excerpts of Mussorgsky's and Rimsky-Korsakov's nationalist operas and analyzing *The Rite of Spring*, Stravinsky's controversial 1913 ballet (at the Paris première, the audience rioted, and the police had to intervene).

## The Arts

**“What is so great about art is that it expresses with tremendous power so much of what we may have, at some moment, felt only vaguely.”**

**I**n this building, we're surrounded by art all day long—in classrooms, offices, and studios; in the hallways, even in the bathrooms. The lunchroom doubles during non-meal hours as practice space, and sometimes performance space, for actors as well as for the chorus, chorale, orchestra, and jazz band.

You will take at least one course in the studio or performing arts every semester you are at Commonwealth: it's a graduation requirement. Many students take more, curious to explore a couple of new or familiar mediums and techniques at the same time.

It's both fun and challenging to involve yourself in wholly creative processes. It's no surprise that Commonwealth artists regularly win awards in all categories of the yearly regional competitions sponsored by the *Boston Globe* and in the national Scholastic Art and Writing Awards.

Beyond our walls, the Boston area offers an extraordinary wealth of museums and galleries, theaters, concert halls, and other music venues. As a Commonwealth student, you'll be perfectly placed to take full advantage of remarkable opportunities—on class trips, with friends, or by yourself. Regularly, our Impromptu Day sweeps the whole school off to a theatrical or musical performance; on Museum Day we fan out in small groups throughout the city and beyond to visit an eclectic array of exhibits. During Project Week and summer break, our artists find rewarding internships working with painters, photographers, and musicians in museums, galleries, and studios, or teaching art in grade schools and community centers.

We enjoy sharing our art with each other and our community. Each spring, our visual artists choose favorite pieces to exhibit in the annual school art show, while performers present a series of concerts, recitals, and plays throughout the year.

**“When it comes down to it, art is all we have left. Material possessions don't feed the soul. You take from your arts; you throw your life into them, and they give back to you, make the fullness of everyday life more apparent, until you approach life itself as an art. And if we learn anything from our Commonwealth experience, it is that there is an art to everything you do.”**

## VISUAL ARTS

### The Artist's Book

What is an artist's book? It is a book in the sense that it tells a story. But it's a story that viewers can touch and walk around. You figure out a way to express a concept or a narrative in a three-dimensional, concrete way. It's the ultimate visual mixed-media creation.

We learn skills that turn up more traditionally in a mixed-media course. We experiment with printing techniques, Photoshop, paint, and, yes, bookbinding. We do often use paper—of interesting varieties and often in new ways; rarely, we'll incorporate a few words. Otherwise you're free to experiment with just about any form you can conceive of and any material you can manipulate in order to convey your message.

### Ceramics

You're guided by demonstrations and literal hands-on individual instruction as we study and experiment with the properties of clay. We have eight wheels in the studio, along with ample table space and elbow room for our small classes. Throwing may look easy, but your first pot may well end up looking like a mushy Frisbee. Don't be discouraged! With concentration and practice, you will end up making bowls, plates, and perhaps a teapot that you will be proud of. You can make such functional items, of course, but you may be tempted to try sculpture.

Once your work is bisque fired, you will learn to decorate the surface using oxides, engobe, or glaze pencils. Glazes offer a complicated but fascinating opportunity to investigate texture and color.

### Drawing and Painting 1

As an observer and a draftsman in this class, you learn to articulate your goals as a picture maker. How do you go about achieving them? You develop technical skills, of course, and learn to use a variety of media effectively and expressively. Many of you will start the year with still-life arrangements, using pencil and dry media. Soon you will be choosing your own subjects and deciding on the length of your projects. By late fall or winter, most of you will be working with paint, studying color mixing and color relationships. Through both close looking and discussion of your compositions, you'll become aware of the different ways you, personally, respond to visual stimuli. You work hard; your confidence builds; your artistic vision broadens; you tackle work of increasing complexity. You develop your own style.

### Drawing and Painting Advanced

Having established a strong base of skills—both technical and observational—you are ready to take artistic risks and enter untested ground. In drawing, that might mean a life-size self-portrait rendered in pastel on toned paper—a work where color relationship is as important to you as the features of the face. In painting you might undertake a vision of a magical landscape described in detail in a book you love. There are no limits. If an idea is worth exploring, you will get the time, materials, and support you need to see it through.

### Life Drawing 1

A strong case can be made that everyone should learn to draw the human figure. For the eager draftsman, regardless of experience, there is no more compelling subject. You draw from a nude model for a double period each week, choosing from among a wide variety of dry media (pencil, charcoal, chalk, Conté crayon, and more). Throughout the year, as you learn to pay meticulous attention to anatomical relationships, proportion, gesture, and light, you will come to develop your own style. A separate period once a week is devoted to anatomy: you study and sketch different sections of a skeleton. This class has no prerequisite other than a lively interest in drawing, hard-to-satisfy curiosity, and the willingness to work hard.

**“None of our books looked anything like books, and no two were alike. With access to a huge array of hand-craft techniques and media, the only thing limiting us was our imagination.”**

**“It astonished me to see how many uses people can find for the materials in the studio. One of my friends modeled a circuit in clay to explain a physics problem he was thinking about. Another hand- built a bathtub!”**

**“In that sunny fourth-floor studio, I learned to draw, I learned to talk, and I learned to think about art.”**



**“Five of us spent Project Week drawing or painting the model—and we all ended up with images that couldn’t have been more unlike each other.”**

**“Our teacher would examine each shot and tell me what spoke to him and what did not. By showing me how particular photographs were expressive, he allowed me to discover what well-composed images have in common. This way, any developments in my style were organic and uniquely mine.”**

**“We started off with simple monoprints, learning the different textures we could get simply by pressing paper against ink. Then we graduated to linoleum cuts, drypoint prints, and, eventually, etchings. It’s a slow process. I’m the kind of person who likes to do things quickly, so printmaking proved to be a much-needed lesson in the worth of slowing down and planning things out thoroughly.”**

## Life Drawing Advanced

With a year or more of experience behind you, you have free choice in your rendering of the figure. Do you prefer dry media or paint? Black and white or color? Vibrant hues? Somber or muted ones? Charcoal? Fingers? Brush? Palette knife? What about the size of your work? It’s up to you. In addition, since by now you know most of our models and their strengths, you can work with them in designing particular poses. During the additional weekly third period of composition, you deepen your study of the human figure as a central design element in art.

## Photography 1

We start with traditional film-based photography—the basic functions of a 35mm manual camera, how to use its settings creatively, and how to develop your black-and-white film in the darkroom. Your efforts there teach you to recognize and produce prints with good tonal range, strong compositions, and expressive qualities. We take time as well to learn how to bleach and tone prints. It’s important to develop an observant eye and be able to make a well-crafted print first, so that you can judiciously navigate the overload of artistic choices that digital photography and Photoshop will dangle so enticingly in front of you next year. During second semester, you create your own pinhole camera, making your exposures on paper negatives. These we scan and use to introduce you to Adobe Photoshop and Lightroom. Over the year, through books and the Internet, you gain a quick history of photography as we study the work of a range of photographers. All along the way, you are invited to share and discuss your prints.

## Photography Advanced

You now have many photographic choices—from continuing to refine black-and-white darkroom procedures to exploring the many aspects of digital photography with Adobe Photoshop and Lightroom. You finally get your hands on digital imaging software, scanners, and large-format printers. You can also work with alternative printing techniques, including cyanotype, Van Dyke Brown, Polaroid transfers, and photo etching. As you make the acquaintance of the wide variety of approaches to photography, and as you experiment with them, you will define your own photographic interests and vision.

## Printmaking 1

From the outset, we combine observation and hands-on work. We study both traditional and contemporary printmaking methods, examining a wide selection of master prints created through the centuries. At the same time, you familiarize yourself with the requisite tools as you make monoprints, linoleum cuts (both monochromatic and color), and intaglio prints. You get to try out and discover your favorites among a number of techniques: line etching, aquatint, soft ground, spit biting and open biting, hand coloring, and collograph. While you work and experiment, you concentrate on refining your drawing and composition skills. You’ll soon find yourself developing your own visual vocabulary.

## Printmaking Advanced

After you’ve learned your way comfortably around the print studio, you’re ready to explore in greater depth the techniques that intrigue you the most. We also now begin to see what happens when you combine techniques. We try mixing traditional and modern (or unconventional) approaches and incorporating innovative elements into the prints we create. You learn as well to manipulate computer imaging software, scanners, printers, and photo etching techniques. The unexpected is always welcome in the print room!

## PERFORMING ARTS

### Acting

The skills you learn in acting—listening, focusing, improvising, vocalizing, partner- and teamwork—are useful for life. You develop critical, metaphorical, and abstract thinking. You study dramatic literature, perform on stage, and gain poise and confidence in public speaking. Acting is English in action.

Acting students participate in the spring all-school acting assembly. But all students have opportunities to perform: you can prepare a monologue and receive coaching for the annual English Speaking Union Shakespeare Competition; you might audition for the fall and winter school plays, or the senior-directed play.

Actor or non-actor, you have a chance to learn about sound, stage, set, and lighting design; directing and stage managing; or supporting performances with publicity, posters, and costume design. And you can feed your curiosity about any aspect of theater in the city: Boston provides it all, with a dizzying variety of productions to attend. You can find internships with theater groups or in professional theaters during Project Week and summers, or, should you so choose, in an ongoing way throughout the year.

**“Rachel, a freshman who played Joanne, was sweet, helpful, considerate, a little shy, and as far from her character as it was possible to be. We got to her big scene. Suddenly, there was Joanne: haughty, jaded, and drunk, not drunk in a sort of clumsy, comedic way but Joanne-drunk—bitter, sarcastic, and poised. We finished the scene, and there was Rachel again, asking our director, Anika, ‘Was that what you were looking for?’ I never got tired of watching that transformation.”**

#### Acting 1

This course, for ninth graders only, offers basic training: body awareness, relaxation, and development of story and monologue. The techniques we use, from the LeCoq School in Paris, are steeped in the physical style of theatre. In acting, your body is your tool—gestures say so much! We use mask training to awaken your body skills: How do I stand and walk? Who am I? Where is my weight? With your most expressive element—your face—covered, you develop your weaker tool—your body—and build physical courage, grace, and ease. Using minimal tools, you will learn to convey emotions, content, and the physical universe around you.

#### Acting Advanced (Acting 2, 3, 4)

The next three years of acting are open to a blend of sophomores, juniors, and seniors. We investigate classical and contemporary drama, tragedy, comedy, Shakespeare, Chekhov, and original scenes. Continuing body awareness exercises, we study style and different worlds—the worlds of dream, combat, confrontation, clowning, and *commedia dell'arte*, a form of Italian masked improvisation. You cultivate voice, grace, timing, rhythm, and responsiveness to an audience. In addition, if part of class is doing, an equal part is watching—heightening your awareness of one another’s work and giving feedback. You develop an eye for directing: within classes and performances, advanced students often lead warm-ups and actor training.

### Dance

#### Advanced Dance

The mixture of strict discipline and freedom to experiment with different styles of dance appeals a great deal to Commonwealth dancers. So does the possibility of doing considerable individual and group choreography and performing in the dance concert held at the end of most years. Most students take dance for sports credit, but you may get the instructor’s permission to take an additional period of dance a week; we then call it Advanced Dance, and it carries an art credit.



**“I’ve gained a really strong sense of my own body and the power of movement when I’m building a character.”**

**“Each student choreographed a dance for our spring concert. We collaborated on each other’s dances and also performed solo dances. Our reward: a long standing ovation!”**



## Music

**D**o you like classical orchestral music? Chamber music? Choral music? Jazz? Hip-hop? Rap? Country? Bluegrass? Musical theater? In our city, you can find it all. Most live performances, you'll discover, are easily accessible by public transportation, and innumerable college radio stations broadcast around the clock. You can even shop for vinyl records if that's your thing. And if you are a performer, a number of amateur and semi-professional groups in the area welcome serious musicians. At Commonwealth, all musicians enjoy a lot of performing time, and if you are so inclined, you can advance your musical training to a very high level.

### Chamber Music

A Haydn string quartet, a Rachmaninoff sonata for cello and piano, a wind quintet—music making doesn't get more intense and intimate than it does in these forms, where you are responsible not only for a demanding part of your own but also to a tightly knit ensemble. Matched with other students at your level, and based on your interests, you work toward performing a piece that pushes you to grow as a musician.

### Chorale

A twelve- to fifteen-voice auditioned group. We focus on expressive and precise performances primarily of a *cappella* works from the Renaissance to the present day, including cantatas, motets, madrigals, and jazz. These different styles require an exacting sense of pitch as well as vocal prowess, a keen ear, and advanced musical maturity. The ensemble comes to sing and breathe as one, while you each develop the poise and independence necessary to perform collectively before an audience.

### Chorus

This forty-five-voice choir welcomes all students and teachers. Our eclectic repertoire ranges from Bach to gospel. Although the ability to read music is not necessary to join, you must love music and be open to taking risks and putting in your full effort. You learn vocal technique and musicianship skills: how to breathe, to listen critically, to manipulate different languages, to sing phrases—not just notes—and how to work responsibly as part of a larger whole. We have many opportunities for performance; in our fall and spring concerts we perform with the orchestra, student soloists, and the occasional guest professional musician.

### Jazz Ensemble

Open to all instruments, vocalists, and levels of skill. Learning and practicing leads us to a spirited concert in the spring. We play material drawn from all decades of jazz, including compositions by Duke Ellington, Herbie Hancock, Miles Davis, John Coltrane, Wes Montgomery, and John Scofield, to name a few. We also, of course, choose material based on how many of us there are in any given year and what instruments we play. Jazz ensemble members should be able to read music, although pieces are also taught by ear. Participation in the jazz theory classes is recommended but not required.

### Orchestra

A small chamber orchestra whose overarching goal for players of varying experience and ability is to create a cohesive and musically expressive ensemble. You study classical music from the baroque to the contemporary era. In the fall, we prepare a major piece, such as the Vivaldi "Gloria" or a Bach cantata, to perform in collaboration with the Chorus. In the spring we undertake a broader range of works. Our orchestra has premiered five student compositions over the last nine years. With teamwork, intensive rehearsing, and dedicated individual preparation, you will grow individually as a musician and be an integral part of a larger experience that is uniquely rewarding for performers and audience alike.

**"It wasn't until I played here for the first time that I felt I had really given my whole self to this school. At the same time, I realized that the music does not have to be about me. I enjoy performing, but sometimes it's just about sharing something beautiful, no matter who is playing."**

**"Looking out into the crowd, I wonder: 'Who are all these people? What does the music mean to them? If each of our brains hears, or at least interprets music differently, then how amazing is it that we can gather together to enjoy it!'"**

“At Commonwealth, I have learned to take nothing I read or see for granted. These years of close reading have made me more observant—more conscious of the subtleties in every text I come across, the cinematic compositions around me, even what subway advertising is really trying to tell me. I can’t help seeing my whole world differently.”



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