

Documentary  
Filmmaking

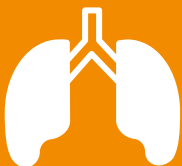
EXPLORE THE  
WORLD OF PEOPLE  
AND IDEAS



Songwriting +  
Music Composition

# THIS GUIDE IS FOR REFERENCE ONLY

The courses and workshops listed in this guide were offered during the summer of 2017. While we will offer a similar range of courses and workshops in 2018, specific options may change. 2018 options will be published later in the fall.



Anatomy &  
Physiology



Startup  
Entrepreneurship



Model  
United Nations



Behavioral  
Neuroscience

# EXPLO360

LEARNING THROUGH EXPLORATION

2017 Courses  
and Workshops  
at Yale

# Engage with the world of people and ideas. Explore your talents and build on your strengths as you lay the foundation for your next chapter.

The courses and workshops at EXPLO 360 at Yale are your opportunity to immerse yourself in subjects that you are curious about, and want to explore in a deep and meaningful way.

All EXPLO courses and workshops are hands-on, and are designed to engage you (and excite you) in the learning process. Debate with people who have different perspectives, expand your worldview, and discover what drives you.

## Course + Workshop Selection

### Morning Course Selection

Courses are assigned on a first-come, first-served basis. Courses in the 100s meet during the first academic period, and courses in the 200s meet during the second academic period. As part of the registration process, you will select and rank your top six (6) preferences of 100-numbered courses and your top six (6) preferences of 200-numbered courses. You will be assigned one course for each morning academic period.

### Afternoon Academic Options

In the afternoon, students choose between two academic options: Workshops or Princeton Review.

#### Afternoon Workshops: 2:45-3:45 p.m.

Except for double period workshop.

#### Princeton Review: 2:45-4:45 p.m.

Princeton Review extends into scheduled afternoon open hour.

Students who choose the workshop option enroll in two workshops — one 300-numbered workshop and one 400-numbered workshop — per session. Workshops meet for the first seven weekdays (300s) and the last seven weekdays (400s) of the session.

The 3-week Princeton Review course is offered for students interested in using the afternoon academic period to focus on improving test-taking strategies or study skills for the SAT, PSAT, or ACT. Princeton Review courses meet daily for two hours, from 2:45 to 4:45 p.m., which is during the workshop period as well as during afternoon open hour. An additional fee applies (see course description).

Princeton Review courses meet every weekday afternoon, except for the second Wednesday.

## Curriculum Innovation at EXPLO

Our curriculum team spends 10 months a year planning and preparing the hundreds of courses and workshops that EXPLO offers each summer.

EXPLO courses are designed to promote curiosity and light students up about learning. Our team of sought-after experts supports professional educators across the U.S. and around the world as they implement project-based lesson plans, and increase student engagement in their classrooms.

Learn more about EXPLO Ed  
at [www.explo.org/explo-ed](http://www.explo.org/explo-ed)

# First Period Course Listings

First Period 100-178

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- 100 Acting + Directing
- 101 3D Animation
- 102 Musical Theater
- 103 Documentary Filmmaking
- 104 Improv Comedy
- 105 A Cappella
- 106 Songwriting + Music Composition
- 107 Drawing
- 108 Public Art

## Writing + Language Pgs. 4-6

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- 110 Creative Writing
- 111 Public Speaking
- 112 Debate
- 113 Personal Essay Writing
- 114 ESOL (English for Speakers of Other Languages) (\$500)
- 115 Writing for Stage + Screen
- 116 Photojournalism
- 117 Fantasy Writing

## Humanities + Social Science Pgs. 7-8

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- 120 Personality + Behavioral Psychology
- 121 Criminal Psychology
- 122 Psychopathology
- 123 Philosophy
- 124 Social Psychology
- 125 Film Studies

## Business, Law + World Affairs Pgs. 9-12

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- 130 Advertising + Marketing
- 131 Business Management
- 132 Startup Entrepreneurship
- 133 Investment Methods
- 134 Mock Trial
- 135 Criminal Justice
- 136 Model United Nations
- 137 Economics
- 138 Political Science
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- 141 Moot Court

## Science + Math Pgs. 13-15

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- 150 Forensic Science
- 151 First Aid Training + Certification (\$50)
- 152 Logic + Strategy Games
- 153 Applied Physics
- 154 Cryptography
- 155 Anatomy + Physiology
- 156 Genetic Engineering
- 157 Infectious Diseases + Immunology
- 158 Biomechanics of Sport
- 159 Science of Fear
- 160 Applied Mathematics

## Design + Technology Pgs. 16-18

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- 171 Interior Design
- 172 Computer Programming + Processing
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- 174 Mechanical Engineering
- 175 Digital Imagery
- 176 Industrial Design
- 177 Surgical Interventions
- 178 Fashion Design

# Second Period Course Listings

Second Period 200-278

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- 204 Beat Making + Music Production
- 205 Rock Performance
- 206 Illustration
- 207 Painting
- 208 Hip-Hop Dance

## Writing + Language

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- 210 Creative Writing
- 211 Public Speaking
- 212 Debate
- 213 Personal Essay Writing
- 214 ESOL (English for Speakers of Other Languages)
- 215 Digital Publishing
- 216 Writing for Video Games
- 217 Satire + Parody

## Humanities + Social Science

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- 220 Personality + Behavioral Psychology
- 221 Criminal Psychology
- 222 Psychopathology
- 223 Philosophy
- 224 Gender, Politics + the Media
- 225 Sociology of Fashion

## Business, Law + World Affairs

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- 230 Advertising + Marketing
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- 232 Startup Entrepreneurship
- 233 Investment Methods
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## Science + Math

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- 253 Applied Physics
- 254 Cryptography
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- 256 Genetic Engineering
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- 258 Science of Extreme Sports
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## Design + Technology

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- 278 Fashion Design

## PERFORMING + VISUAL ARTS

First Period 100-108, Second Period 200-208

**100/200**

### Acting + Directing

When actors and directors work from the same frame of reference, they deliver powerful performances. We will analyze and interpret a variety of scripts, breaking each scene and dialogue sequence into beats. In small director/actor groups, you'll both direct and perform selected scenes, with focused attention on line delivery, intent, story, and action. By both performing and directing, you'll discover how different directors' perspectives can completely alter the meaning of a script, and how an actor's performance can bring a script to life. Whether you're stepping on stage for the first time or looking to hone your chops, you'll get the opportunity to not only explore the crafts of acting and directing, but also stage a final performance that all of EXPLO will be invited to see.

**101/201**

### 3D Animation

Build your ground plane, enter shaded mode, and get ready to create some dominance. This is 3D Animation 101, and we're here to take you through the process, of rendering your first digital 3D model frame-by-frame. With Maya — professional 3D animation software used to create such wonders as the 3D pigs in Angry Birds and otherworldly landscapes in Avatar — you'll create static and dynamic objects, design simple shapes like polygons and spheres, and learn how to transform those shapes into natural-looking 3D forms. Working with color and texture, you'll experiment with rendering digital objects in different materials, like glass, metal, and wood. By playing around with point, ambient, and directional light and shadows, you'll discover how the ways you perceive an object affect how you interact with it. As you begin to understand the complexities of modeling objects in three dimensions, you'll get a sense of what it takes to build highly-detailed digital models, and will have a foundation on which to further explore the field of 3D animation.

**102/202**

### Musical Theater

Yale is closer to Broadway than you think! Join our musical theater troupe as we sing, dance, act, and direct scenes from some of the most memorable musical productions ever performed. From small Off-Broadway revivals to classic hits, our class will investigate the technical aspects of musical theater as well as the dramatic relationship between spoken lines and singing and dancing. We'll analyze classic performances such as *Les Misérables* and *Phantom of the Opera*, and explore how Broadway hits like *Hamilton* and *Wicked* have expanded the genre. By the time we hit the stage at Explopalooza with our own final performance, you'll dance and sing your way to EXPLO fame. Watch out, Broadway!

**103**

### Documentary Filmmaking

"You have to understand, my dears, that the shortest distance between truth and a human being is a story."  
— Anthony de Mello.

From showing how unbridled greed crumbled a corporate giant like Enron to discovering the majesty and grandeur of the National Parks, the best documentary films take you on a journey that challenges your point of view and expands how you understand the world around you. Now it's your turn to step into the director's chair: What story will you tell? This summer, collaborate with a band of fellow filmmakers to shine a spotlight on an issue that speaks to you. Together, you'll observe, film, and interview the people at the center of your story, collecting the raw footage for your documentary. As you collectively learn lighting, audio, and basic editing techniques — and understand the importance of storyboarding and shot composition — we'll explore the best ways to frame your narrative from beginning to end. So make your final edits and watch the credits roll — your investigative opus is ready to shake up the airwaves!

**104**

### Improv Comedy

Do you have a talent for making people laugh? Think you're in line to become the next Kate McKinnon or Jimmy Fallon? If so, then we've got a banana peel — er, an improv studio — waiting for you. You'll learn how to best express your inner comedian by studying characterization (think the Upright Citizen's Brigade), stage positioning, and other strategies that will keep any audience rolling in the aisles. You'll discover the art of thinking on your feet and pulling from your acquired bag of tricks to turn anything as mundane as a trip to the grocery store into comedy gold. While our focus will be on making the audience (and each other) laugh, the emphasis of the course will be on developing confidence in performance and the ability to improvise alone or with a group.

## PERFORMING + VISUAL ARTS CONT.

First Period 100-108, Second Period 200-208

105

### A Cappella

Think of your voice as an instrument capable of playing nearly anything: a jazz riff one minute, a multi-layered hip-hop beatbox the next, and a barbershop melody a moment after that. In this course, while practicing your ability to sight-read, developing your sense of pitch, and learning basic principles of music theory, you'll work with a team of vocal musicians to create a variety of songs with harmony, melody, and rhythm. We'll translate some of our favorite tunes (whether they're R&B, country, or pop) into a cappella arrangements to create layered musical soundscapes rich in tone and tenor. And like any band striving to be heard, we'll take our show to the Explopalooza stage — blending solos and riffs into a beautiful vocal orchestra.

106

### Songwriting + Music Composition

Turn the last eight bars of Handel's Messiah into an Adele-worthy anthem. Sample Queen for a Pharrell Williams track (which you compose) and write the lyrics for a Janelle Monae song (before recrafting it for Haim). To write and compose the next instant classic, we'll experiment with everything from rap and pop to country and folk. As we guide you through basic musical notation, music theory, compositional structure, and instrumentation, you'll begin drafting your own arrangements and original compositions. We'll explore how different artists approach lyric writing — from Bob Dylan's activist anthems to Jay-Z's lyrical narcissism to Taylor Swift's inspired pop — and you'll compose your own verses and lyrics. As you match words to music, you'll leave with inspired, original songs you've developed yourself — and the foundations of a songwriting voice to launch your musical career.

107

### Drawing

From the energy of movement caught in a quick gesture drawing to the more polished feel of a studied piece, drawing is both challenging and fun. This course is a great introduction to basic concepts of art. We will choose from a wide array of subjects as we develop our skills by rendering perspective, tone, line, form, light, and shadows. We'll work extensively in pencil and charcoal, and we will discover the compositional tricks and drawing techniques of masters such as Leonardo da Vinci and Michelangelo, as well as contemporary artists. At the end of this course, you'll have the opportunity to show off your work in the EXPLO Art Show.

108

### Public Art

A giant rubber duck dwarfs boats in Hong Kong's harbor. A 15-foot red ball is squeezed under an overpass in St. Louis. City buildings and wall murals are spray-painted by street artists like Banksy or Blu. Public sculptures double as thought-provoking installations, and places to gather. Together, we'll use the sidewalks, buildings, trash cans — even yourselves — to install public art that will generate attention, create a buzz, and change the public space. Commissioned to create a piece for EXPLO, you'll focus on medium, materials, and location to convey your artistic intent and build community on Yale's campus. Will your work emphasize the overlooked, unify the student body, or challenge societal norms? This summer, the EXPLO campus is your canvas — how will you use it?

203

### Narrative Filmmaking

Your dream: to tell incredible stories on film that will someday open doors, make headlines, and (hopefully) win awards. To get you into the filmmaking world on the ground floor, you need a story that's going to capture the imagination and emotions of your audience as much as it does yours. Working in small production teams, you'll begin by sketching out your group's chosen narrative with a rough story treatment — who are your principal characters? What is your story about? — before writing, editing, and storyboarding your script. As you film, direct, light, shoot, and edit your short film, you'll learn how to use professional equipment and editing software, optimize shot design, and get the most out of your location, props, and actors. Through it all, you'll get a peek into the production process that goes into making a narrative film — with you behind the lens.

## PERFORMING + VISUAL ARTS CONT.

First Period 100-108, Second Period 200-208

204

### Beat Making + Music Production

It's your library of sound, your beat machine, your sonic boom. Drum by drum, we'll help you build a repository of rhythm that will let you construct the sickest beats around. Using professional music layering and production software, you'll learn how to make 8- and 16-bar loops, how to cue them, and how to arrange them into full-on house, hip-hop, and dubstep tracks. By looking at (and listening to) sound in its most elemental form, we'll figure out how to deconstruct songs and experiment with different instruments, effects, tones, and modifications (like frequency, decay, and attack) to create an entirely new sonic landscape. Sampling pieces of your favorite tunes — such as Freddie Mercury's distinctive vocals, Ne-Yo's catchy melodies, or Kanye West's 808 drum kit — you'll meld them into a crafted collection of beats and loops to create your own original tracks. As you build your beats arsenal, get ready to launch a musical movement that'll make the masses go wild.

205

### Rock Performance

Drums. Bass. Electric guitar. Mandolin. Banjo. If it rocks, we'll play it. In this course, we'll revisit the history of rock-n-roll, rehearsing and interpreting music from a variety of rock masters (The National, The Beatles, Radiohead, Mumford and Sons, and others). Our in-class jam sessions will layer sound upon sound and incorporate a range of musical embellishments — getting you ready for an end-of-session live performance that will blow the doors right off of Explopalooza. Along the way, we'll investigate the dynamics of performing as a band, learn how to integrate a beat with a melody, and discover how to bridge tight progressions and rhythm shifts. So what are you waiting for? Grab your instruments and get ready to rock!

Note: Students must bring their own instruments and have at least one year's experience on their instrument. A drum set will be provided.

206

### Illustration

Imbue a simple three-line drawing with incredible levels of emotion, like Picasso or Matisse. Use stippling, cross-hatching, and cross-contouring to give your illustration depth and dimensionality. In this studio-based course, we'll enter the world of illustration through conceptual and technical challenges, and explore a wide variety of illustration techniques and styles. To test how different illustration mediums convey a range of emotions, paint a protest poster in the style of Shepard Fairey, draw a pen-and-ink cityscape that the *New Yorker* would publish on its cover, and illustrate a word (in your illustration style of choice) to capture its meaning. Sketch an editorial cartoon on the latest civil rights laws to understand how a single image can pack a punch, and draw yourself into a paneled narrative to learn how and when to use text to illustrate your point. No matter which medium captures your imagination, you'll be exposed to a variety of techniques and styles to help you on your way to developing your own.

207

### Painting

Pick up a brush and join in as we study and paint still life, portrait, abstract, and nonobjective artwork. Starting with basic value scales and painting techniques, we'll investigate the properties of paint, light, color, and form. As a class, we'll look at the history of painting and visit Yale museums to observe the techniques of master painters firsthand. As you develop your own compositions, you'll incorporate new painting strategies into your own watercolor and acrylic works. This is a studio-intensive course that will culminate with an exhibition of your paintings in the EXPLO Art Show.

208

### Hip-Hop Dance

Beyoncé's Superbowl Halftime show. Kendrick Lamar's Grammy performance. And Keone & Mariel Madrid's dance to C2C's Happy. When you dance hip-hop, you're dancing alongside some of the greatest performers out there, and having a blast doing it. As you develop your spatial awareness — and sense of style — you'll begin to "speak" the physical vocabulary of hip-hop, from stretching, warm-ups, isolation, flexibility, and strength exercises, to just letting loose. We'll break down the freshest steps from hip-hop, street, funk, and jazz — like floating, popping, and locking — and learn how to feel it, dance it, and own it. By studying and discussing videos of today's pros, you'll analyze characteristics of professional hip-hop dance and weave their styles into your own. We'll experiment with improvisation and choreography and put it all together in a high-energy performance in front of all of EXPLO.

## WRITING + LANGUAGE

First Period 110-117, Second Period 210-217

**110/210**

### **Creative Writing**

What is the nature of the fiction writer's craft? In this course, we'll look at works ranging from novels and narrative writing to science fiction and journals. By exploring different types of writing and using your senses as prompts, you will learn to express in writing what it means to be human, to be alive, and to be yourself. In individual writing assignments, we will work on style, character development, and effective use of language in order to help you create your own writing voice. Through small group feedback and peer-editing sessions, you'll learn to grow through critique and bring your writing to a new level.

**111/211**

### **Public Speaking**

If you would rather be in a room full of spiders than speak in front of a crowd, you are not alone. This course will help you harness that nervous energy and direct it towards dynamic presentation skills, and will introduce you to the art of articulating your opinions in ways that are persuasive, engaging, and informative. Public speaking is a skill that is not only necessary in the classroom, but in everyday communication as well. Through debates, discussions, and writing exercises, you will learn how to hone the speaking skills that you've had all along.

**112/212**

### **Debate**

When you're right, you're right — right? Wrong! When debating a case, the verdict depends not simply on "the facts," but also on a debater's ability to organize and argue those facts. In this course, you'll learn how to arrange a constructive argument, as well as how to cross-examine, critique, rebut, and refute the arguments of your opponents. We'll practice making our points through inductive and deductive reasoning, and discuss which of the two is more time-efficient and appropriate for specific cases. To conclude, we'll face off against each other in a debate tournament that may use the team-policy format or the Lincoln-Douglas style. May the best contender win!

**113/213**

### **Personal Essay Writing**

The first thing you learned about writing an essay was likely that you needed to start with a "thesis." The second thing? Probably that you should have three paragraphs to "prove your thesis." Well, a personal essay is much more than a simple point-by-point, fact-by-fact argument. It can be a personal memoir, a meditation on an idea, a journalistic investigation, or a humorous anecdote. In this course, you will craft an array of personal essays that will be both purposeful and powerful, concise and carefully considered. Whether it's for *The Huffington Post* or a college admissions application, your pieces will develop a distinctive tone and voice that will grab your audience's attention. Aspire higher than simply proving a thesis... aim for your writing to leave a mark.

**114/214**

### **English for Speakers of Other Languages (\$500)**

Interview guests on your talk show. Film your own TED Talk. Pitch a groundbreaking business idea to a team of investors. Want to improve your English? Pick up your pen and your EXPLO-issue iPad Mini — which you'll get to use for the duration of this course — and let's get started! Together, we'll work on honing your written and spoken English skills through class projects and writing assignments. You'll experiment with writing persuasive essays, letters, video journal entries, and movie and restaurant reviews. To sharpen your speaking skills, you'll practice delivering speeches, debating your favorite issue of the day with your classmates, and spending time getting to know American students on campus. Through in-class critiques and special one-on-one instructional and conversational sessions (that occur outside of class), you'll receive the critical feedback you need to take your written and spoken English to the next level. Ready to make your mark? We'll give you everything you need to improve your English fluency.

Note: There is a \$500 fee for this course.



## WRITING + LANGUAGE CONT.

First Period 110-117, Second Period 210-217

115

### Writing for Stage + Screen

Whether it be *Mad Max* or *Hamilton*, *Inside Out* or *Spotlight*, a remarkable play or film starts with a remarkable script. Do you have the next Oscar-winning story bubbling inside you? Join us in our playwriting workshop, where you'll learn the nuances of writing for the big screen and for the stage. Together, we'll review classic plays and screenplays and see how scenes in a script get translated into the final production of a film or stage production. As you begin developing your own script, you'll learn how to move a narrative along with stage directions, timely cuts, and fadeouts, as well as tricks for creating realistic dialogue and developing dynamic characters. If you've ever had an inkling to pen the next great classic drama, this is the course for you.

116

### Photojournalism

An unarmed man stops a column of tanks in Tiananmen Square. A circle of Christians protect a group of praying Muslims from harm in the middle of Tahrir Square. A picture may be worth a thousand words, but these iconic images are far more powerful than that. Grab your digital camera and join us as we explore the magic of photojournalism. Together we'll find source material on the campus of Yale University and discover how to frame your images to communicate the essence of the story you're trying to tell. As you begin creating a portfolio of photo essays — some commissioned by freelance editors, some for inclusion in a gallery show, and some, potentially, for publication on campus — you'll learn about basic photography principles and digital post-production techniques. The essential elements are simple: composition, timing, and something to say. With your camera in hand, this summer you'll tell all the best stories without having to say a word.

Note: You will need a 10-megapixel (or higher) digital camera and media storage for this course. Disposable, cell phone and 35-millimeter film cameras are not appropriate.

117

### Fantasy Writing

From the surreal scenarios of *Inception* and *Catch 22* to the moral struggles in *The Hobbit*, fantasy fiction redefines reality with otherworldly characters and quests that shed light on life as we know it. If you were to write your own fantasy fiction series, what alternate universe would you create? Will your hero battle a foe that only exists in the main character's mind — or will she risk her life to put an end to the stranglehold of evil? As you conceive a cast of characters and build up the world in which they live, you'll test out different plot concepts and put sample passages up for peer review. Once you've decided on a central theme, you'll build the foundation — call it a moral center, or a question humans have been grappling with for centuries — on which the rest of your story, book, and series will stand. So grab a sword, or maybe just a pen, and let's get to it!

215

### Digital Publishing

The website's up, the deadline's approaching, and our new editor-in-chief is you. Ready to learn how the publishing world works from the inside out? Collaborate with fellow editors to create an online publication that has a clear voice, focus, and aesthetic, publishing creative work created right here at EXPLO. Working both ends of the peer review process, you'll discover how editors shape a piece of writing — pieces with appropriate tone, consistent style, and length — and how to respond to feedback as a writer. Ready to edit a good 3,000-word piece down to a 1,500-word story — then decide which pieces make the cut, and which are destined for the rejection stamp? As you review query letters (and draft your own), you'll better understand how to successfully market your work. And as your journal's content takes shape, you'll be at the forefront of creating a magazine that showcases great talent, gives student writing the platform it deserves, and pulls back the curtain on an industry as revered and vanguard as you make it!

Note: This is a publishing class; while students will have an opportunity to write and edit some of their own work, the primary focus of the course will be working in the capacity of a literary or digital media editor.

## WRITING + LANGUAGE CONT.

First Period 110-117, Second Period 210-217

216

### Writing for Video Games

Writers, give us your universe. You are about to create a whole new gaming world, designed on morals and principles (or lack thereof) that you derive, with characters you create who face challenges and decisions only you could dream up. What kind of video game do you want to write (more Assassin's Creed? Final Fantasy? Fallout? Something else entirely?) and how do you want the game to play out? Write a 1-page spec sheet of your game narrative: who are your characters, where is your game set, and how will the action (sandbox, progression, or emergent) play out? Describe characters and invent backstories, develop subquests, and craft a story flowchart. As you map out a complex layering of all the decisions your characters will make, you'll compile each possible path into the final action script. However you design your game world, you'll end up with a game concept that's as complex as it is immersive.

Note: This is a narrative creation course; students will neither create video games nor do any computer programming in this course.

217

### Satire + Parody

"In times like these, it is difficult not to write satire." The Roman poet Juvenal said that 2,000 years ago, and yet — if John Oliver, *The Onion*, and *Family Guy* are any indication — it may be even more true today. As we examine and emulate these bastions of sardonic wit, we will create and craft our own articles, monologues, op-eds, and political cartoons that both ridicule and regale. We'll also look at the function of parody, asking, for instance, what effect did *The Borowitz Report* have on the 2016 presidential election? Or how did Larry David's *SNL* caricature of Bernie Sanders help (or hinder) his campaign? It's easy to roll your eyes at the decadence and depravity of contemporary society. Satire, however, strives to look at the world head-on and speak the (hilarious) truth about it.

## HUMANITIES + SOCIAL SCIENCE

First Period 120-125, Second Period 220-225

**120/220**

### **Personality + Behavioral Psychology**

Which is easier to change: your personality or your behavior? Through discussion and brainstorming exercises, we'll learn how difficult it is to make objective descriptions of personality due to its complex relationship with behavior. Looking at our family structure, birth order, interfamily relationships, and the influence of culture and our peers, we'll discover the factors that contribute to our own character development. While dissecting individual elements of personality, we'll discover what influences generally cause personalities to change. By gaining a better understanding of personality, you'll begin to realize why you (and those around you) behave the way you do.

**121/221**

### **Criminal Psychology**

What makes someone commit a crime? Genetics? Psychological problems? Social and environmental influences? Criminologists have attempted to understand crime in the context of these potential factors, yet why crime exists is still as difficult to answer as ever. In this course, we'll delve into various theories on criminal psychology, profiling serial killers, adolescent thieves, and white collar criminals to discover how different types of crimes correlate to various personality traits and socioeconomic backgrounds. After testing the popular "Broken Windows Theory" and examining the effects of zero-tolerance policies on crime, we'll create our own crime-prevention policy and program, with the goal of not just slowing but breaking the cycle of crime.

**122/222**

### **Psychopathology**

What is the line that separates abnormal behavior from mental illness? We'll attempt to answer this question and more as we explore schizophrenia, bipolar disorder, and dissociative identity disorder. Studying the lives of supposedly insane historical figures — such as Sylvia Plath, Winston Churchill, Joan of Arc, and Michelangelo — will give us insight into the cultural and historical factors shaping society's view of abnormal behavior. As we debate various psychological treatments, you'll learn how to use the Diagnostic and Statistical Manual of Mental Disorders (DSM) to determine criteria for depression and personality disorders. Come gain a new understanding of what it means to be mentally ill, and a better awareness of the issues surrounding the treatment of abnormal behavior.

**123/223**

### **Philosophy**

What does it mean to be good or evil? How does a just society operate? Are our lives real, or just a dream state? We'll attempt to answer enduring philosophical questions such as these by studying and comparing the arguments of some of the discipline's foremost figures. In addition to analyzing the writings of philosophers such as Descartes, Nietzsche, Plato, and Locke, we will critique popular contemporary philosophy found in Hollywood movies like *Interstellar* and *Life of Pi*. Join us as we attack age-old arguments and dilemmas with fresh ideas and try to shed new light on the mysteries of life.

**124**

### **Social Psychology**

How much does the environment you live in determine who you are? Through various activities and exercises — and by studying historical group behavior experiments — we'll determine the effects of socialization on identity and discover who determines our social norms and what influences our entire society. Examine why we're attracted to certain people as friends and others as mates with Sternberg's Triangular Theory of Love. Test for unconscious prejudices with the Jane Elliott exercise, the Clark Doll experiment, and the Implicit Association Task. Use aspects of the Myers-Briggs test to begin to understand the different personality types that exist in the world — and how it can help you better understand yourself and how you relate to others. Through it all, you'll gain new insights into how you behave in the world and how society functions.

## HUMANITIES + SOCIAL SCIENCE CONT.

First Period 120-125, Second Period 220-225

**125**

### Film Studies

How do you judge a film's worth: by the performances of its actors, the intrigue of its story line, its box office pull, or some combination of the three? In this course, you'll learn to analyze cinema as an art form. We'll view clips from the films of directors like Spike Lee, Kathryn Bigelow, and Martin Scorsese, and examine how those directors use a mix of elements to construct images, build tension, reveal character, and advance the narrative. From cinematography to editing, you'll understand how various aspects of movie production can work together to great success (and abysmal failure). As we critique both contemporary classics and old favorites, you'll learn to write your own opinionated film reviews, as friends look to you for the ultimate thumbs up or thumbs down.

**224**

### Gender, Politics + The Media

Confident. Controlling. Forceful. Shrill. In the media, which adjectives are more often used to describe men, and which are more often used to describe women? How do the answers to these questions shape how male and female politicians are judged? We'll examine the social and psychological construct of gender and its relationship to politics: What are our definitions of masculinity and femininity? How do these roles play out in the political arena? From women's suffrage to modern political developments – like Elizabeth Warren's crusade to hold big banks accountable, or Cecily Strong's portrayal of Fox's Megyn Kelly – we'll review everything from film clips and ad campaigns to news programming and election coverage. Together, we'll begin to understand the role gender continues to play in the building and dissemination of political power and influence – and explore the ways in which culture and experience shape us as men and women.

**225**

### Sociology of Fashion

Bomber jackets. Skinny jeans. Who decides what's hot and what's not? Do fashion magazines, top designers, and the wealthiest advertisers control what catches on? Or is it a cultural, grassroots movement? In this course, we'll explore how fashion trends are made, discussing ideas from "The September Issue" and examining the messages sent by the photo spreads, runway models, and glossy ads of major magazines. We'll investigate how fashion can define our sense of identity – posing the question: is it possible to be preppy, jock, or hipster based solely on what you're wearing? Using what we learn about how to influence style, how could we start a fad? How will we market our image? How can we seep into the student body's psyche? This summer, we'll put our trend-setting to the test.

## BUSINESS, LAW + WORLD AFFAIRS

First Period 130-141, Second Period 230-241

**130/230**

### Advertising + Marketing

The truth? Most people don't need whatever it is you're trying to sell them. Your job is to persuade them to think that they do. As project manager, art director, copywriter, and graphic designer, you'll learn and develop the tools you need to create compelling campaigns. To get your clients to buy in, you'll target the right emotions, get your messaging on point, and leave out everything else. Develop catchphrases that become earworms, ads and flyers that force the eye to linger, and billboards that grab attention from 50 paces away. Judge the effectiveness of your branding and marketing techniques by conducting demographic field tests. Tweak your art and your copy, and get ready to pitch your campaign. Because remember, you're not only selling this to consumers — you first have to sell it to your company's clients.

**131/231**

### Business Management

If you want to be a winner in this boardroom, you have to balance your company's budget, improve your business management skills, and gain the trust of your investors. Turning this company into a top-tier firm is going to take strong leadership and effective management — which could mean the difference between a company that inspires loyalty, creative thinking, and productivity among its workforce, and one that simply doesn't. To make sure your business is as ethical as it is financially sustainable, you'll formulate a business plan that maximizes the company's profits, provides your employees with a living wage, positions your company in the marketplace, and gets your product or service to market before the competition. Create an ad campaign — complete with new branding and messaging — and conduct market research with your colleagues to see which ideas most resonate with the public. Once it's time to pitch your business plan to investors, you'll be ready.

**132/232**

### Startup Entrepreneurship

Failure is a trap door, and it's right below your feet. Before you, a crowd of industry giants, venture capitalists, and angel investors. Behind you, your co-founders, the opening slide of your killer pitch, and a herd of others all vying for the same start-up capital. What you say and do over the next few minutes could make or break you. But — you've identified emerging markets, found openings for new products (like a printer that prints makeup or an app for finding last-minute babysitters), and come up with unique and promising product applications. You've prototyped and field-tested your product, consulted with experts, crafted a business plan (and budget), and honed your investor pitch to a T. All that's missing is the start-up capital. But don't worry; you've got this. This dream is yours for the taking; we're here to help make it happen.

**133/233**

### Investment Methods

Buy low. Sell high. Sell short. (Also, what does that mean?) Come grab the bull market by the horns and manage your own stock portfolio. Applying your informed analysis, explore how currency exchange rates, inflation, unemployment, interest rates, and debt affect the market. Decide whether it's time to ditch the stock or double down. Learn how the Consumer Price Index is used as an economic indicator — and assess why companies manipulate asset values in order to make predictions about their bottom line performance. Through it all, you'll gain a solid understanding of market indices, how companies leverage assets, and what stock brokers look for in selecting companies for their portfolios. At the end of three weeks, your portfolio may be in the red or the black, but your understanding of the stock market will definitely be on the rise.

**134/234**

### Mock Trial

The only way to understand the workings of a courtroom — and seek out the truth — is to stand in the shoes of a participant in a court case. After familiarizing yourself with the facts of a simulated civil or criminal case, experience the drama by taking the side of prosecution or defense. Collaborating with your team, you'll develop and present your case, prepare witnesses for direct examinations, and discredit your opponent's witness on cross. You'll then present your evidence and argue your case in the Yale Law School courtrooms. From opening statements to closing arguments, you'll improve your public speaking and persuasive argumentation skills, and get a better sense of how the American judicial system works.

## BUSINESS, LAW + WORLD AFFAIRS CONT.

First Period 130-141, Second Period 230-241

**135/235**

### Criminal Justice

A white man goes on a killing rampage, and he's labeled mentally ill. A man of color does the same, and he's branded a terrorist. If the punishment is supposed to fit the crime, what happens when the crime — or the evidence — is tainted from the get-go? Reviewing criminal justice systems, we'll see how the rule of law is applied from police states and countries with strict gun control laws to nations with more relaxed views on nonviolent offenses. We'll examine the impact of prison time on recidivism rates, how solitary confinement affects a prisoner's mental health, if mandatory minimum sentencing is necessary, and whether the death penalty is an effective (or even ethical) tool against rising crime rates. If the best crime is the one that's stopped before it starts, we'll figure out which policing style — legalistic, watchman, or service — is the most effective. And using case studies such as that of *Serial's* Adnan Syed, we'll look into how external factors — such as politics, public perception, prejudice, and new technology — could have a hand in determining the outcome of the case.

**136/236**

### Model United Nations

To better this world, you could fight for human rights, support developing economies, and resolve civil wars. Or, you could battle (or back) coups in developing nations, conduct secret backroom trade deals, and negotiate the terms of a prisoners' release. As delegates to the General Assembly, you'll research, present, and debate the different positions that nations take in order to solve the pressing issues facing our world. Your job is to move international policy in a positive direction by using every available means in your diplomatic arsenal. By examining the history, principles, and practices of the United Nations, you will gain a better understanding of modern day international relations, and learn to address many of the major problems that challenge humanity.

**137/237**

### Economics

Why does Urban Outfitters intentionally mark up the price of their clothing if they could sell more items at lower prices? What is the value of your leisure time — would you work on Saturdays for \$5 an hour? \$10 an hour? \$20 an hour? Come explore the basic principles of micro- and macroeconomics as we learn how companies set prices to maximize their profits, explore the impact of unemployment, and understand the effects of supply and demand on price. By studying and debating the economic issues surrounding taxes, monopolies, the minimum wage, and monetary policies, you'll discover the important impact that economics has on everything from the car you'll buy to the neighborhood you'll one day call home.

**138**

### Political Science

Syrian refugees seek safe passage across your border. Do you and your team welcome them into your country, block their entry, or actively work to send them back? And what would the political fallout be for each? When you're in a position of power, what constitutes good leadership depends on everything from your country's political climate to its economic realities. Exploring the basic divisions of power, we'll examine how political philosophies play a role in decision-making, government systems, and political participation. Looking at everyone from Machiavelli to Karl Marx, you'll debate what makes for an effective political philosophy. To discuss the merits of national vs. local government, challenge your peers to a rap battle (think: *Hamilton's* Cabinet Battle #1). Craft policy on gun control that addresses constituents' concerns without alienating special interest groups. And as you better understand all the elements that go into good governance, you'll design a constitution from the ground up for a developing nation.

**139**

### Public Relations

You're an image maker, reputation shaper, and all-around status-quo shaker. But what happens when your client's credibility takes a hit from their foreign policy flubs, or their social media goes viral — for all the wrong reasons? The art of spin is delicate, indeed. We'll help you navigate the waters as you manage the profiles of public figures and create credible buzz for events and happenings on campus. You'll learn how to shape and craft social media messaging for individuals and groups, and analyze how those social media hits (and misses) can affect both the clients' brands and the audience's perceptions. You'll experiment with client positioning, find out whether staging publicity stunts makes a difference, and work damage control when your client veers from the scripted path. From rehabbing reputations to building up excitement for events, you'll quickly find that the spin never stops.

## BUSINESS, LAW + WORLD AFFAIRS CONT.

First Period 130-141, Second Period 230-241

### 140 International Relations

A nation offers aid to one country ravaged by an earthquake, but doesn't intervene in a second country's civil war. Another nation announces it will open its doors to all incoming refugees, only to scale back weeks later and start implementing quotas. In the global game of international relations, which nations get to decide the rules of play? Taking on the mantles of global leaders, corporations, government agencies, and NGOs, you'll work with (and against) your classmates on international efforts ranging from uncovering terror cells to halting an ever-widening Zika outbreak. Plan a response to a natural disaster that gets aid to where it's needed without it becoming embroiled in bureaucratic red tape. Craft policies that address the refugee crisis and take into account the struggles refugees face on the ground. As we delve deeper into the dance of international diplomacy, you'll examine how the interplay between power, order, communication, and self interest impacts foreign policy and international law. So — how do you stop a mosquito?

### 141 Moot Court

According to the US Constitution, should the "right to bear arms" allow citizens to keep a collection of assault rifles? Does the fourth amendment cover cell phone searches by the police? Unlike lawyers in a mock trial, you won't be presenting the facts (which have already been established) or calling any witnesses (who've already given testimony). Your job: to demonstrate whether a previous ruling is constitutional, and argue the application of a law with a written brief and oral arguments. You'll review case studies to understand and apply the concept of precedent, and learn how to read and write briefs by laying out the facts, procedural history, and arguments supporting your case. As you develop policy arguments for (or against) rulings under common law, you'll hone your attack with a specific case — such as affirmative action or free speech in schools — and discover exactly how exhilarating arguing your position before a panel of judges can really be.

### 238 Conflict Negotiation + Mediation

Two musicians claim ownership over a distinctive chord riff, next-door neighbors battle over property lines, and a pair of classmates argue over who should get credit (and the prize money) for an award-winning essay. How would you help them navigate the conflict? As we introduce you to the principles of conflict mediation, we'll teach you how to frame a conversation that will bring both parties to the negotiating table. You'll learn how to identify (and reframe) target and resistance points during negotiations, and discover how to use standards of comparison and other mediation tools to bring about an amenable resolution for all parties involved. Through simulated cases and real-life scenarios, you'll leverage game theory in your negotiation strategies and gain a deeper understanding of the role perception and emotion play. You'll leave with a foundation of alternative dispute resolution and leadership skills that you'll be able to call upon in your future personal, academic, and professional life.

### 239 Media Studies

From the first "miracle cures" to the latest beauty, health, and fashion claims — not to mention the claims made by pundits and politicians — the media has undoubtedly shaped our lives and influenced how we choose to view the world. Is what we're absorbing unbiased information — or does it have an agenda? Looking at past and present media outlets, we'll lift the veil on everything from how the media sources material to how it packages, presents, and funds it. To get an insider's view into the media machine, you'll work with fellow students to save a client's reputation, collaborating on quick-fire ways to "get ahead of the story" and manipulate it to serve your purposes. Research what media sources are most popular among students on campus and figure out how to utilize those sources to spread an idea and influence public opinion. Figure out how to disseminate information about a frightening issue without provoking citywide panic. The more you examine how we get our information — whether it's music, blogs, vlogs, TV, the Internet, or social media — and how we choose to interact with it, the more you'll be able to discern the fact from the spin.

## BUSINESS, LAW + WORLD AFFAIRS CONT.

First Period 130-141, Second Period 230-241

**240**

### **World Religion + Conflict**

Peace, love, and charity. Compassion, tolerance, and... missiles? When it comes to treating others as we want to be treated, why does it seem like religion, rather than bringing us closer together, is often the very thing driving us apart? In the contentious religious conflicts of Syria, Darfur, and Afghanistan, is one side right and the other wrong – or are people using faith as a means to reach political ends? When powerful religious leaders use theological principles as a call for social action, is there a line they should (or shouldn't) cross? We'll analyze the current role that religion plays in our lives – in local and world politics, in education, in social movements – and examine the historical influence of religious doctrine on secular thinking and world conflict. Many believe different religious ideologies can coexist in harmony. To that end, we'll examine the many regions of the world where this is common, and analyze what prevents those places which are in conflict from finding resolution. Together, we'll try to understand the changing role of religion in an ever-growing, ever-connected world.

**241**

### **International Economic Development**

Do you know where your T-shirt comes from? Beyond the store where you bought it? And the country listed on the "Made In" tag on the collar? What if you could trace your iPhone back to the factory where it was built? In this era of global commerce – where almost nothing is produced entirely in one place – we'll investigate the complexities and issues surrounding free trade and the aftereffects of international aid on industrial and third-world nations. For instance: why would China pay for a new highway in Ghana? Or: what is the effect of Americans buying fair trade products made by villagers in Laos? Through debates and role-plays, we'll explore the economic and social costs of the global market and simulate our own model of the world economy. Join us and discover the power of purchase – and how that shirt on your back may be more important than you think.



## SCIENCE + MATH

First Period 150-160, Second Period 250-260

**150/250**

### Forensic Science

Don't touch anything (with your bare hands), don't contaminate the scene, and don't jump to convict until you've examined every shred of evidence you find. Join us as we dig into the history of forensics (from Sherlock Holmes to modern day CSI) by reconstructing the science of actual case studies. We'll investigate ballistic fingerprinting, debate the ethical question of maintaining DNA databases of suspected criminals, and learn how to establish time of death based on different stages of insect development in a corpse. And you had better pay attention, because in the final week, your class will be assigned to a mock forensics case that will demand all of the laboratory and sleuthing skills you can muster.

**151/251**

### First Aid Training + Certification (\$50)

A cry goes out for help. Can you answer it? Join us as we teach you to respond to emergencies and tend to everything from simple scrapes to severe injuries. Emergency response requires quick thinking and immediate actions, so we'll focus our attention on emergency scene assessment — learning how to identify concussions, shock, and choking victims. We'll also learn how to set broken bones and how to treat for major bleeding. As we practice the proper response to heart attacks, we'll master using AEDs to stabilize victims and CPR techniques for victim resuscitation. In the end, you'll have gained the confidence and skill to be a part of any life-sustaining team.

Note: Because students have the option to become Red Cross First Aid, Infant/Child First Aid, CPR and AED certified if they elect to take the optional certification exam at the conclusion of the training, there is an additional \$50 fee for this course.

**152/252**

### Logic + Strategy Games

What if, in a game of rock-paper-scissors, you knew that the odds were your opponent would throw 'rock' after he throws 'paper'? From poker games to chess boards and The Price is Right stage, we'll use games to explore logic and strategy, and figure out how game theory can be applied across many aspects of life. Together, we'll play the numbers, and based on what they reveal, learn how to make rational, personally advantageous decisions. We'll also practice manipulating those numbers — whether it's to beat a friend in blackjack or ace a multiple choice test — to shift the odds permanently in our favor.

**153/253**

### Applied Physics

Your mission: level a tiny rock tower by launching three volleyballs over a six-foot wall. Or, perhaps plan — in less than two minutes — how to cantilever a 2-ton rock sculpture off the edge of a bridge. Through a variety of hands-on and challenging projects, you'll chart the directional force of gravity to predict the movement of an air rocket the moment after you launch it. Measure the distance you need to maximize torque to determine how a soccer player sets up a "cross" by planting their standing foot and swinging their hips to direct the ball across the field. Examine and modify how friction affects hovercrafts, trebuchets, and other devices. Learn how to predict, measure, and compute changes in trajectory, acceleration, and momentum, using sensors and analytical software. Harness your newfound knowledge of physics — and get ready to see the world in a whole new light.

**154/254**

### Cryptography

What do you get when you cross the genius of *The Imitation Game* with the ethical ramifications of governments unlocking iPhones? Cryptography. Learn how to make and break codes using probability, patterns, and mathematical equations. We'll look at the real world applications of codes. Without them, Caesar may never have had an empire, Hitler might have won WWII, and you might not be making secure credit card purchases on Amazon. We'll look at the implications of cryptography from its incarnation in Egypt to its current effect on commerce, civil liberties, and law enforcement. Step aside, Alan Turing — this is cryptography for anybody's mind.

**155/255**

### Anatomy + Physiology

Did you know that shivering and sweating are essential for our survival? What makes you blush? Cry? Sneeze? Why do we get fevers when we're sick, and how does our skin play an essential role in maintaining our major metabolic reactions? These common everyday phenomena and others will be explained as we delve into human anatomical structure through in-class experiments. Build a model of a femur, tibia, and patella to see how a knee works from the inside out. Follow the flow of blood from the superior vena cava as you dissect an animal heart. Test your nerve transmission response variance between hot and cold; study allergies and food sensitivity; and learn about the various systems in our bodies that keep the human machine moving longer than most man-made machines. Once you begin to see how your body works, you'll be better equipped to understand everything that goes into keeping it running at optimal condition.

Note: Students are required to bring long pants and close-toed shoes in order to participate in the laboratory components of the course.

## SCIENCE + MATH CONT.

First Period 150-160, Second Period 250-260

156/256

### Genetic Engineering

When it comes to genetic engineering, there are two central questions: (1) What are the possibilities? and (2) What are the consequences? Gene alteration can increase crop production and shorten growing seasons — but that can also make your food more vulnerable to disease. Discover how allele pairing affects genetic traits and simulate the transgenic and knockout techniques used to modify genetic sequencing. In the laboratory, sample and extract live DNA, and run experiments such as PCR Amplification of DNA, the transformation of *e. coli*, and learn how to alter the proteins in a string of DNA cells to make them glow. From biological warfare to human cloning, the risks involved in genetic engineering are huge — but as you'll see, the possibilities are endless.

Note: Students are required to bring long pants and close-toed shoes in order to participate in the laboratory components of the course.

157/257

### Infectious Disease + Immunology

Over 35 million people worldwide have HIV/AIDS, the Ebola epidemic spread faster than the World Health Organization ever thought possible, and drug-resistant superbugs could soon render many antibiotics obsolete. Your body has a whole host of ways it fights off pathogenic invaders like the common *e. coli*, including both innate and adaptive immunity. But what happens when our immune system isn't enough? We'll discover why diseases like Ebola, malaria, HIV, tuberculosis, and the Zika virus continue to proliferate despite our bodies' best defenses (think: counterattacks from large organs like your skin down to the tiny T-cells of the lymphatic system). By studying the attack strategies of our invaders, we can understand how to battle back, limit exposure, and slow the spread of disease. We'll have to pick our battles and our means — from working to strengthen our immune systems, designing cures, or calling the public to action. Suit up, and help save lives.

158

### Biomechanics of Sport

Have you ever wondered why pitchers are prohibited from throwing sliders until they're in college? Or how Steph Curry has perfected his jump shot form so he could consistently nail three pointers, resulting in record setting performances? Enter the field of sports biomechanics, a discipline that measures what happens when we push our bodies to the limit, and what consequences athletic competition can have on our health. Using still frames, film, sensors, and traditional coaching techniques, we'll practice pitching, passing, tossing, hitting, jumping, and running, and use the laws of physics, anatomy, and mechanics to analyze the results. You'll find out what happens inside your body when you reach your peak performance, and what goes wrong when you're sidelined by an injury. And while this class isn't designed to make you a better athlete, it will teach you the physics behind your movements — which might just make you a better athlete after all. So come join us as we knock physics out of the classroom and pitch it into the world of sports.

159

### Science of Fear

What are you so afraid of? Actually, the better question is, *why* are you so afraid of the things you're so afraid of? In this course, you'll get to explore the psychological basis for fear. We'll identify how cultural fears are perpetuated (think: spiders and Slender Man) and discuss case studies that analyze the origins of psychological fears (claustrophobia or a fear of heights, for example). We'll also look at the other side of things — testing and observing for the evolutionary benefits of our “fight or flight” instinct, as well as worry and trepidation. Why do our hearts race when we're scared? Why do scary moments etch themselves in our memory? Why are we reluctant to take risks? Together, we'll discover that we may not like being scared-to-death — but that our fearful instincts may be the very things that keep us alive.

## SCIENCE + MATH CONT.

First Period 150-160, Second Period 250-260

**160**

### Applied Mathematics

Forged works of art. Intricately mapped-out heists. Fantasy baseball teams “designed” to bring in a huge profit. Think predictions can pay off? Let’s do the math, shall we? Come explore the fascinating connections between math, art, beauty, and nature. We’ll experiment with game theory — and play the field. Ready to put your training to the test? Hit a crime scene. You’ll gather witness intel, evaluate the reliability of forensic tests, and use logic to narrow down a field of potential suspects. Think you have what it takes to crack the ciphers, clues, and codes that could lead us to the answers? It all comes down to this: using your wits, your sleuthing skills, and the overwhelming power of mathematics to demonstrate what “predicted beyond a reasonable doubt” really means.

**258**

### Science of Extreme Sports

Test aerodynamic drag in a scaled wind tunnel to determine how skydivers control terminal velocity; experiment with updrafts and crosswinds to understand how hang gliders stay aloft; and figure out how people mentally prepare to flip, jump, fly — and safely return to tell the tale. As extreme sport scientists, we’ll examine the physics, psychology, physical demands, and endorphin highs that turn one-time experiences into lifelong obsessions. Just as science drives the creation of new sports, it pushes old ones to extremes. Discover how divers can avoid “the bends” on deep-sea dives and predict how “invisible” helmets (which inflate on impact) can reshape how we address sports safety. As you analyze the thrill of the rush, you’ll understand how extreme sports manipulate science (and fear) — and put that surge of adrenaline to work for you.

**259**

### Behavioral Neuroscience

No one in the world has the same perceptive capabilities that you have. Join us as we learn the inner-workings of our senses of smell, sight, taste, touch, and hearing. You’ll discover how fast action potentials travel through neurons as we conduct experiments on papillary response and motor commands. To understand how we develop our sense of taste, examine papillae on the tongue to evaluate a subject’s sensitivity to a variety of foods. To better understand how neural pathways work, perform a brain dissection. We’ll conduct a variety of experiments and develop a better understanding of the scientific process as we analyze data and formulate conclusions about how our senses function. Jump into our crash course in neuroscience and get ready to better understand the way we perceive the world around us.

**260**

### Philosophy of Physics

Black holes, alternate universes, wormholes, time travel, and the speed of light: where does science begin and science fiction end? And what answers do our scientific findings provide to some of the most enduring philosophical questions about creation, time, existence, and individual perspective? To get some answers, start by pulling back the curtain on how the universe works. Use gravity waves to explore concepts like Einstein’s theory of relativity. Perform thought-experiments like Newton’s rotating bucket test. And grapple with philosophical puzzles like Schrodinger’s cat paradox — discussing and arguing the ramifications of each on our perception of reality. Throughout our investigation, we’ll look to science fiction — like *Doctor Who* and *Star Trek* — pop culture that’s caught our collective imagination, stirred debate, and asked us not only what is possible... but what is real?

## DESIGN + TECHNOLOGY

First Period 170–178, Second Period 270–278

**170/270**

### Architecture

Walk past Georgian and Gothic Revival buildings — from the Old Campus quad to Sterling Memorial Library — and know that if you want to build your architectural skills, you've come to the right place. This is the campus that produced such architectural luminaries as Eero Saarinen, Maya Lin, and Sir Norman Foster. In this studio-intensive course, we'll introduce you to the fundamentals of architectural design and the tools of the trade. Reviewing famous architectural plans for inspiration, visit Yale's most iconic buildings and jump into the process of designing your own structures, beginning with hard-lined scale drawings and working your way to 1/4" architectural scale designs that factor in everything from the angle of the sun, to the local property offset ordinances, and to the shape and size of a housing plot. In the process, you'll develop an architectural project that will explore the nature of form, function, material, location, and aesthetics before you display your work in the EXPLO Art Show.

**171/271**

### Interior Design

Your client is opening a bistro. She wants it to feel hip, urban, open, and inviting. Your job: make it happen. How will you lay out the floor space? What type of furniture will you recommend? What color themes will you integrate? In this course, we'll get hands-on with interior design. You'll investigate color theory and textures to build harmonious palettes, implement light and lighting systems to evoke mood, and incorporate design principles to create efficient spatial flows. You will meet the aesthetic demands of a variety of clients and spaces — an architect's loft, a beach resort's lobby, or a suburban home's game room — coming up with comprehensive proposals, complete with color boards, fabric swatches, and layout designs to meet and exceed the client's expectations.

**172/272**

### Computer Programming + Processing

Processing, a visual language created by the MIT Media Lab, is like an interactive, electronic sketchbook — one that's powered not by a paintbrush, but by code. Using the same logic and syntax as Java, you'll draw complex shapes and figures and incorporate user keyboard and click functionality in applications you design... all in a snap. With Processing, you can visually express an idea or feeling in the same way an artist uses a palette or a photographer uses a camera. Create a user interface for an art installation, and with each click, users can alter the dimension, scope, and shape of the piece. Implement a program that creates a selfie avatar, so visitors can add their face to the installation. Tasks that are cumbersome in other languages become simple and straightforward in Processing, making the visual programming language a great way to get a strong foundation in computer programming.

Note: This course uses an open source programming language, Processing. Students are required to bring a "modern" laptop or notebook computer running Windows 7 or greater, OS X 10.7 or greater, or Linux that can connect to the internet wirelessly. No coding experience required!

**173/273**

### Mobile App Design

Strap up, strap in, and get ready to hit the ground running! Since you already know how to code, in this course you'll learn how to build and deploy a mobile app from start to finish. We'll introduce you to Java and Objective-C concepts, and get you moving with simple, graphical app development software. What will you build? Productivity tools to streamline your day? A memory app to keep your to-do list at your fingertips? A basic gaming app to fill your extra time? As you focus on programming your app's content, functionality, and aesthetic, we'll check out the design and utility of the apps you love: what makes them stand out? And what do you think makes them so successful? You'll leave our boot camp with a beta app (that you can continue to develop), an understanding of the mobile app marketplace, and the tools you'll need to take your programming (and your app) to the next level.

Note: This course is designed for students with coding experience. Students who wish to learn coding should enroll in Computer Programming + Processing. Students are required to bring a modern laptop or notebook computer running Windows 7 or greater, OS X 10.7 or greater, or Linux that can connect to the internet wirelessly.

## DESIGN + TECHNOLOGY CONT.

First Period 170-178, Second Period 270-278

174/274

### Mechanical Engineering

A string of dominoes knocks a golf ball off a table into a basket that is attached to a pulley, which lifts an exacto knife that pops a series of water balloons, filling a pitcher that sits on top of a plate that sits on top of a halved orange that sits on top of a juicer that reams the juice out of the orange and into a glass. Sure, you could've just poured a glass of OJ, but what fun is that? Come investigate the fundamental concepts of engineering and design by overflowing cups, launching objects, and dropping bowling balls. Through a variety of engineering challenges, you'll explore energy flow and structural analysis, and we'll switch on your creative juices, introduce you to the work of engineers, and have you turning mundane tasks into mechanized miracles.

175

### Digital Imagery

The arts of painting, printmaking, and photography have merged into an eclectic mix full of possibility in the field of digital imagery. We will learn not only how to capture good photos, but also how to digitally manipulate our images using layers, masking, blending, and special effects. From harnessing the power of color manipulation and digital filters to making new, original art using advanced Photoshop techniques, our hands-on studio course will help you create works of art that might not be possible in a traditional medium. Throughout the course, you'll develop a portfolio of digital images that highlight the new tricks and techniques you have learned. With the power to improve reality — or create an alternate one — where will you take your photography this summer?

Note: You will need a 10-megapixel digital camera and media storage for this course. Disposable, cell phone, and 35-millimeter film cameras are not appropriate.

176

### Industrial Design

They fall out of your ears right when you need them and the cord tangles itself around anything in proximity. Ever wish your headphones (or your helmet, or even your pen) worked as perfectly as you want them to, at a price point you're willing to pay? There's a design for that — if you create it. To help you understand how and why design decisions are made, we'll investigate and break apart the functional and aesthetic design of everything from furniture to iPhone cases. With your keen eye, you'll identify a design problem with an existing product, improve the functionality of certain features, and build a series of prototypes to refine a new solution that is more functional and appealing. Ready to invent a better, more beautiful world? Then get ready to enter the innovative field of industrial design.

177

### Surgical Interventions

Simulate the contractions of a human heart, engineer an aortic valve, and build a reconstructive device to heal a broken bone. In this course, you'll not only identify and diagnose diseased and injured organs and bones, you'll design, construct, and surgically introduce solutions. Working with specimens that simulate human illnesses and injuries, you'll perform animal dissections, use medical illustration techniques to prototype solutions, create scale models to make sure they're viable, and implant your device into specimens you've dissected once your lab-created invention is ready. We'll walk you through surgical techniques — from how to hold a scalpel to how to correctly pierce each layer of tendon or tissue — and you'll work through digital simulations to prep for the dissections and surgery. Your ability to wield a scalpel can determine whether you become a surgeon. Your ability to collaborate and keep your head under pressure could determine whether you become a great one.

## DESIGN + TECHNOLOGY CONT.

First Period 170-178, Second Period 270-278

**178/278**

### **Fashion Design**

Design a dress for the Oscars out of newspaper and paper clips. Build Lady Gaga's next costume with bubble wrap, gum wrappers, and washi tape. Or create a series of period-specific ball gowns out of curtains, pillow cases, and shoelaces. Learning principles of fashion design, you'll examine shape and form, understand how to sketch and sew a line for a seamless silhouette, and figure out how proportion and scale can affect the look and drape of a piece. Collaborate with your fellow designers on a series of fashion and costume challenges that will require you to think critically and act creatively. Our work will focus on fundamental elements and principles of visual design (unity, balance, rhythm, emphasis), which you'll incorporate to enhance the pieces you make — garments with ruffles, pockets, and fitted waist lines. Will your piece have what it takes to wow the fashion world? Take your design to the runway and see if it flops or flies.

**275**

### **Graphic Design**

Graphic design is the art of problem-solving in visual form. Join us as we combine text, type, and graphics into visually arresting and extraordinary designs. Using the tools in the Adobe Creative Suite, you'll transform rough sketch ideas into fully rendered posters, brochures, and other printed material as you learn how to use color, shapes, textures, and typography to effectively convey messages, moods, and information. We'll explore the formal elements of design through a series of investigative exercises that will expose you to concepts of content, form, and structure; and our in-class critiques will help you synthesize and develop your design ideas. If you're interested in how words and images are composed in the world around you, this is the place to start composing those words and images yourself.

**276**

### **Network Administration Bootcamp**

Quick: you've just been hired by your school's IT Department. Your first task: set up a functional local area network (LAN) and secure each node, all the way from servers and routers down to monitors and printers. At IT Bootcamp, you'll need to know your network from top to bottom, because hackers are everywhere. Encrypt passwords, debug systems, and repair network rifts — almost as if they'd never happened in the first place. Learn how to set up, problem-solve, and administer devices over various networks — and how to secure various operating systems (Linux, Mac OS X, Windows). You won't just patch a network that's been breached, you'll troubleshoot different scenarios to uncover its potential vulnerabilities. From setting up and coding automated scripts to do your work for you to problem-solving network compatibility issues and file-sharing nightmares, this is a crash course in IT best practices. Want the ability to step into a future IT position with ease? Sign up, grab your keyboard, and get ready to become the resident IT genius.

**277**

### **DIY Arts + Culture**

Design and silkscreen T-shirts. Create handbound journals. Produce a line of whimsical bracelets. In a world where DIY sites like Pinterest and Etsy are more popular than ever, are you ready to make your own handcrafted mark? In this studio intensive course, you'll learn how to craft functional objects like paper and pencils, turn thrift store clothing into high fashion, repurpose found objects into art objects, and create, create, create! Along the way, you'll learn about the process of transforming your ideas into finished, saleable, and functional works of art. By the end of the course, you'll stage a stellar exhibit of your work at the EXPLO Art Show — and will leave with the DIY chops to continue to make (and market! and sell!) your work when you return home.

# 300s Workshop Listings

## Athletics + Recreation

Pgs. 21-22

- W301** Fencing
- W302** Yoga + Meditation
- W303** Basketball
- W304** Plyometrics + Speed Training
- W305** Zumba - Latin Dance Fitness
- W306** Pilates
- W307** Badminton
- W308** Soccer for Boys\*
- W309** Tennis: Basic\*
- W310** Squash
- W311** Quidditch for Muggles
- W312** Ultimate Frisbee\*

## Business + Logic

Pg. 23

- W321** Event Planning
- W322** Game Theory
- W323** Interview Skills
- W324** Team Building + Leadership Skills
- W325** Geocaching
- W326** Business Negotiation
- W327** Personal Finance
- W328** Street Smarts: The Art of Urban Navigation\*
- W329** Ethics of Economics

## Global Issues

Pg. 24

- W331** Apocalypse Management
- W332** International Crisis Management: Outbreak
- W333** Human Rights in Conflict Zones

## Language + Media

Pg. 25

- W341** Concert Production
- W342** Flash Fiction Writing
- W343** Character Studies
- W344** Slam Poetry

## Performing Arts

Pg. 26

- W351** DJing + Turntable Instruction
- W352** Audition Skills
- W353** Ballet
- W354** Latin Dance
- W355** Live Action Role Playing

## Psychology, Sociology + Culture

Pg. 27

- W361** Utopias + Dystopias
- W362** Psychology of Harry Potter
- W363** Stress Management Techniques
- W364** Psychology of Relationships
- W365** Sociology of Social Networks
- W366** Terrorism

## Science

Pg. 28

- W371** Marine Biology\*
- W372** Heart Science\*
- W373** Chemistry Lab\*
- W374** CPR/AED Certification (\$50)

## Visual Arts

Pg. 29

- W381** Stage Makeup
- W382** Cinematography
- W383** Typography
- W384** Architecture of Yale
- W385** Mandala

# 400s Workshop Listings

## Athletics + Recreation

Pgs. 21-22

- W401 Fencing
- W402 Yoga + Meditation
- W403 Basketball
- W404 Plyometrics + Speed Training
- W405 Zumba - Latin Dance Fitness
- W406 Pilates
- W407 Badminton
- W408 Soccer for Girls\*
- W409 Tennis: Intermediate\*
- W410 Flag Football\*
- W411 Karate
- W412 Track + Cross-Country Running\*

## Business + Logic

Pg. 23

- W421 Event Planning
- W422 Game Theory
- W423 Interview Skills
- W424 Team Building + Leadership Skills
- W425 Geocaching
- W426 Business Negotiation
- W427 Personal Finance
- W428 Social Entrepreneurship

## Global Issues

Pg. 24

- W431 Apocalypse Management
- W432 International Crisis Management: Insurgency
- W433 Human Rights: Gender Issues
- W434 Community Service\*

## Language + Media

Pg. 25

- W441 Reality TV: A Closer Look
- W442 The Art of Storytelling
- W443 Sci-Fi Writing
- W444 Writing Action + Plot

## Performing Arts

Pg. 26

- W451 DJing + Turntable Instruction
- W452 Audition Skills
- W453 Jazz Dance
- W454 Sketch Comedy
- W455 Stage Combat

## Psychology, Sociology + Culture

Pg. 27

- W461 Utopias + Dystopias
- W462 Psychology of Harry Potter
- W463 Stress Management Techniques
- W464 Psychology of Relationships
- W465 Sociology of the Hunger Games
- W466 Gender Identity

## Science

Pg. 28

- W471 Marine Biology\*
- W472 Heart Science\*
- W473 Chemistry Lab\*

## Visual Arts

Pg. 29

- W481 Stage Makeup
- W482 Film Editing\*
- W483 Accessory Design
- W484 Art + Antiquities of Yale
- W485 Digital Self-Portraiture

\*These workshops are double-periods



## ATHLETICS + RECREATION

Students enrolled in Athletic + Recreation workshops are required to bring appropriate athletic wear (e.g. shorts and t-shirt) and footwear (e.g. sneakers). Students will not be allowed to participate if they are not dressed appropriately.

### W301 / W401

#### Fencing

Come learn the eight target areas of foil fencing through call and response drills designed to work on attack and defense techniques. *En Garde!*

### W302 / W402

#### Yoga + Meditation

Learn the half moon, sun warrior, and downward-facing dog positions. Learn the art of mindfulness, and dedicate your practice to becoming more centered and aware of your surroundings and feelings. Strengthen muscles, increase flexibility, and center your mind during this introduction to the physical and spiritual workouts of yoga and meditation.

Note: Athletic mats will be provided, however, it is strongly encouraged students bring their own mat if they have one.

### W303 / W403

#### Basketball

Set a pick, block a shot, and hope you don't choke at the free throw line. Whether you run the courts every day or are new to the sport, come work on drills, strategy, and techniques as we practice shooting hoops.

Note: Students participating in the basketball workshop must bring a mouth guard or purchase one from EXPLO.

### W304 / W404

#### Plyometrics + Speed Training

Need to get your body moving after a morning of your brain working? Want to stay in shape, improve your athletic prowess, or perfect a killer vertical this summer? Come increase your speed and power in this active and fun training workshop.

### W305 / W405

#### Zumba

Zumba is a fusion of Latin and international music that is more dance party than fitness regimen. Work out with moves originating in cha-cha, salsa, reggaeton, rumba, and more. This fun and effective interval training program will leave you both energized and dancified.

### W306 / W406

#### Pilates

Ready to test your core muscles? Through controlled mat-movements such as the spine twist and the swan, you'll strengthen your body, stretch your muscles, and center your breathing as you complete a workout that's good for both the body and the mind.

Note: Athletic mats will be provided, however, it is strongly encouraged students bring their own mat if they have one.

### W307 / W407

#### Badminton

Come join us for a classic leisure activity — a game of badminton. Whether you are a seasoned player, a tennis player looking for a new challenge, or someone who thinks a shuttlecock is something patented by NASA, you'll enjoy this surprisingly challenging (and fun!) game.

### W308 (boys) / W408 (girls)

#### Soccer (Double Period)

Whether you call it soccer or football, come develop your technique and strategy in this soccer workshop, which is appropriate for beginning and experienced soccer players. We'll focus on fundamental passing and shooting techniques, as well as basic strategy, and there will be plenty of time for practicing these skills in both drills and games.

Note: This workshop runs from 2:45 p.m. - 4:45 p.m. (through Open Time) to accommodate travel to and from the Yale Athletic Fields Complex and provide more time on the field. Students participating in the soccer workshop must bring a mouth guard or purchase one from EXPLO. Shin guards will be provided, however, students are strongly encouraged to bring their own shin guards and soccer socks.

### W309

#### Tennis: Basic (Double Period)

Channel your inner Rafael Nadal, Andy Murray or Venus or Serena Williams! Work on your strategy, strokes, and serves. Join us to learn the basics of tennis or enhance your specific skills.

Note: This workshop runs from 2:45 p.m. - 4:45 p.m. (through Open Time) to accommodate travel to and from the tennis courts and provide more time on the court. Students participating in the tennis workshop must bring their own tennis racket.

## ATHLETICS + RECREATION

Students enrolled in Athletic + Recreation workshops are required to bring appropriate athletic wear (e.g. shorts and t-shirt) and footwear (e.g. sneakers). Students will not be allowed to participate if they are not dressed appropriately.

### W310 Squash

Grab your goggles and racquet and step up to the service line! Squash is a game of strategy, stamina, quick decision-making, and concentration. Work on your racquet technique, footwork, and rally to boasts and putaway finishes on the squash courts in Yale's Payne Whitney Gym. Join us to learn more about and practice this fast-paced, athletic game!

Note: Students participating in the squash workshop must bring athletic shoes with non-marking soles.

### W311 Quidditch for Muggles

Come discover the magical world of Quidditch! While flying on a Nimbus 2000 or Firebolt isn't in the cards (yet), we'll do what hundreds of colleges and private clubs are doing across the country — starting our own Quidditch team. Whether you're a Beater, Seeker, or Chaser, come learn the rules and positions, chase the Quaffle, avoid the Bludgers, and find the Golden Snitch with us!

### W312 Ultimate Frisbee (Double Period)

There are lots of ways to throw a frisbee, but you'll need skills and smarts if you want to play a game of Ultimate. In this workshop, we'll start small, learning rules of the game and basic disc control, before moving on to the formations, techniques, and strategies you'll need to win in this college campus favorite.

Note: This workshop runs from 2:45 p.m. - 4:45 p.m. (through Open Time) to accommodate travel to and from the Yale Athletic Fields Complex and provide more time on the field.

### W409 Tennis: Intermediate (Double Period)

If you are beyond the basics and want some time to hone your tennis skills, join us for this workshop. We'll focus on strategy and individual techniques, in both drills and games.

Note: This workshop runs from 2:45P p.m. - 4:45 p.m. (through Open Time) to accommodate travel to and from the tennis courts and provide more time on the court. Students participating in the tennis workshop must bring their own tennis racquet.

### W410 Flag Football (Double Period)

To run or to pass? That will be the question... or at least one of the many questions we consider as we strategize offensive attacks and coordinate defensive schemes in games of flag football.

Note: This workshop runs from 2:45 p.m. - 4:45 p.m. (through Open Time) to accommodate travel to and from the Yale Athletic Fields Complex and provide more time on the field.

### W411 Karate

If you want to smash bricks with your head, this is not the workshop for you. Karate isn't all swift kicks and punches — you need to know stance and breathing techniques. Working individually and with others, you will practice the focus and skill you need to discover the spirit of karate.

### W412 Track + Cross-Country Running (Double Period)

Step into the shoes of the first Olympians and participate in some of the oldest sporting events in the world. Come learn proper running form as we practice track races, relays, and cross-country training. On your mark... get set... GO!

Note: This workshop runs from 2:45 p.m. - 4:45 p.m. (through Open Time) to accommodate travel to and from the Yale Athletic Fields Complex.

## BUSINESS + LOGIC

**W321 / W421**

### Event Planning

How do you plan a fundraiser? Or a friend's birthday party? What are the keys to making sure your event goes off without a hitch? In this workshop, you'll be working to create the perfect get-together for EXPLO students. You'll plan and create an activity for your friends and see who's ready to hire you for their next big bash.

**W322 / W422**

### Game Theory

Risk, Monopoly, Axis and Allies...for these games, you don't need luck — you need strategy. From classics to new "non-commercial" games, we'll help you think in a whole different way about winning, losing, and playing the game.

**W323 / W423**

### Interview Skills

Step one: Get the interview. Step two: Sell yourself! This workshop will give you an introduction to the dos and don'ts of the professional and collegiate world. From appropriate attire to virtual communication, you'll discover what it takes to stand out from the crowd.

**W324 / W424**

### Team Building + Leadership Skills

Every organization needs you to understand when to follow and when to lead. In this workshop, you will learn ways to discover your own strengths and weaknesses as a leader. You'll bond with your teammates while participating in activities, challenges, and games designed to help you hone your leadership skills — skills that you can bring back to high schools, teams, groups, and eventually to college.

**W325 / W425**

### Geocaching

Geocaching uses GPS-enabled devices to aid players engaged in real-world treasure hunts. It is a favorite pastime, adventure tool, learning game, and sport of the world over. You and your teammates will hunt for urban as well as wilderness caches, solve puzzle caches, and discover local EarthCaches.

**W326 / W426**

### Business Negotiation

Looking to refine your business skills — or perhaps to borrow your parents' car for the evening? Learning the basics of negotiation strategies is an essential component to being a good leader and manager, whether in the boardroom, classroom, or your own living room. Learn how to assess the needs of all stakeholders, ask for what you need, counter the other party's request, prepare options, and reach creative solutions that everyone can live with.

**W327 / W427**

### Personal Finance

Do you know what it means to live within your means? With a weekly budget that barely keeps you clothed and fed, how will you make it happen? Come discover the tricks of living on a budget and having enough money left over to sock some away in the bank. Discover ways to increase your net worth, from building your savings by setting long terms goals you want to work towards — like creating a personal fund for college — to capitalizing on low interest rates with credit cards and investment accounts that actually work for you.

**W328**

### Street Smarts: The Art of Urban Navigation (Double Period)

Is shopping at Urban Outfitters the closest you have come to actually being "urban?" In this practical workshop, we will learn how to navigate within a city, discovering the hot spots, the short cuts, the bus lingo, and the best method of planning a subway trip. We'll talk travel and transportation as we learn the ins and outs of becoming city slickers.

Note: This workshop will occasionally run from 2:45 p.m. - 4:45p.m. (through Open Time) to accommodate field trips within New Haven.

**W329**

### Ethics of Economics

How can American children have equal opportunities if some schools get more tax dollars than others? Should you cut employee wages or close the plant and relocate overseas? In a world where corporate rights are often pitted against those of the individual, it can be difficult to decipher when it's necessary to play by the rules (and the law), and when it's okay to let those rules slide. Investigate issues like corporate tax breaks, pharmaceutical price hikes, and college tuition inflation, and uncover the impact moral decisions have on the survival (and profit margins) of individuals, businesses, and the economy.

**W428**

### Social Entrepreneurship

Want to save the world? Want to start your own business? This workshop will show you how to do both... at the same time! We'll create business models that are financially responsible, while addressing important social issues.

## GLOBAL ISSUES

### W331 / W431

#### Apocalypse Management

Asteroids. Nuclear war. Super volcanoes. Zombies. When the apocalypse hits, you'll act as an elite group of advisors to governments, media outlets, and citizens. Can you manage the flow of information to reduce public panic and maximize survival? Can you adapt economic policy to a new structure of trade and technology? You'll be tasked with crafting and managing a plan to rebuild society under a new world order, no matter what crises you face on the way.

### W332

#### International Crisis Management: Outbreak

Ebola. Measles. Can you contain the next disease outbreak? Once a disease spreads, what responsibility do countries have to care for the sick, the refugees, and the doctors who intervene? International politics meet crisis management in this workshop, where we will simulate an international crisis and take on the roles of key players responsible for managing an escalating situation where human lives are at stake. Can you keep the disease at bay? It's time to find out.

### W333

#### Human Rights in Conflict Zones

Is all really fair in love and war? Even when it comes to human rights? Through role plays as representatives in the human rights movement and various government and state agencies, you'll investigate whether human rights are universal, and how to resolve conflicts between different sets of rights. Debate the best way to enforce international human rights laws while still providing domestic sovereignty, and be tasked with designing a solution to key contemporary human rights issues.

### W432

#### International Crisis Management: Insurgency

Rebels. Terrorists. Insurgents. How do governments respond under attack from within their country? International politics meet crisis management in this workshop, where we will simulate an international crisis and be the key players responsible for managing an escalating situation where human lives are at stake. You'll try to outlast and outsmart the rebellion from within, but also take on the role of other countries and decide when to intervene. Can you defeat the insurgency?

### W433

#### Human Rights: Gender Issues

In Afghan families where all the children are girls, mothers will sometimes pass off one of their daughters as a boy. Why? Because in parts of Afghanistan, boys can move freely in society, but girls cannot. Throughout much of the world, gender issues continue to dominate life. We'll analyze demographics and calculate how the politics of gender have affected the ratio and perception of girls and boys across the globe. As we contemplate a gender-neutral world, you'll understand just how important the differences between men and women really are.

### W434

#### Community Service (Double Period)

"Be the change you wish to see in the world," Gandhi said. But what does that mean in your day-to-day life? Through local community service and utilizing the Global Issues Network, we'll explore what it means to be a global citizen and find ways to take action in our local community.

Note: This workshop will run from 2:45PM - 4:45PM (through Open Time) to accommodate community service opportunities within New Haven.

## LANGUAGE + MEDIA

**W341**

### Concert Production

Everyone gets a backstage pass as we discover what goes on behind the curtain. From the light booth to the soundboard, from the band to the audience, you'll find out what it takes to run the big night without a hitch. Those enrolled in this workshop will have the option to assist with one or more evening main event concerts, working from set up to sound check with outside acts that come to perform on campus.

**W342**

### Flash Fiction Writing

Dribbles and Drabbles. Six word stories and Twitter novels. Welcome to the world of very, very short fiction. We'll explore the effects of word choice and length while creating quirky characters, setting up dynamic plots, and writing stories that leave the reader stunned... in 100 words or less.

**W343**

### Character Studies

Hamlet. Dorothy. Jack Sparrow. Maleficent. How do you create enduring characters, on the stage or on the screen? We'll look at a variety of famous characters, and analyze how their writers reveal them to us. As we go, you'll create distinct characters of your own, drawing their personalities and telling a unique story.

**W344**

### Slam Poetry

The crowd is here, the judges are ready, and you've got the mic: what're you going to say? We'll break down how to take your poems from the page to the stage by breaking stanzas into beats, perfecting your body language and pitch, and even creating group poems performed together on stage. By the end, you'll craft a performance worthy of straight 10s and a roaring ovation!

**W441**

### Reality TV: A Closer Look

"The Bachelor", "X Factor", "Keeping up with the Kardashians", and "The Voice". We'll look at what makes for good reality television — the sneak peek at glamorous (or treacherous!) living conditions, the drama, the competition, and of course the unpredictable process of elimination — and why we as a culture just can't stop watching.

**W442**

### The Art of Storytelling

The ability to spin a riveting tale has the power to help you win trials, close deals, give a tear-jerker toast, and negotiate yourself into a dream job. You'll develop your source material — and we'll help you focus on tone, physicality, and comedic (or dramatic) timing. Along the way, you'll gain the confidence and skills you need to transform your experiences into tales of epic proportions for an audience of hundreds or an audience of one.

**W443**

### Sci-Fi Writing

Space aliens. Robots. Flying cars and time travel. Drawing on famous sci-fi giants such as *Star Wars*, *The Hunger Games*, and *Star Trek*, we'll examine the use of technology and science in writing, and how to craft a futuristic world that is both plausible and imaginative.

**W444**

### Writing Action + Plot

Bank robberies and heists, time bombs and natural disasters. From James Bond to Indiana Jones, we'll study the use of action in film and on the page and learn to use plot devices and forward action to tell a story. By the end, you'll leave your readers perched on the edge of their seats just waiting to know what happens next.

## PERFORMING ARTS

### W351 / W451

#### DJing + Turntable Instruction

Try your hand at the fundamentals of the (digital) turntables. We'll explore the various interpretations of turntablism, from the scratch-heavy production of DJ Premier to the multi-textured layers of beat composers like RJD2, Swedish Mafia, David Guetta, and Cut Chemist. With a library of digital samples at your disposal, you'll practice constructing dancehall mash-ups (or whatever other groove you're feeling), and let your new skills rip at a final on-campus performance.

### W352 / W452

#### Audition Skills

Picture yourself onstage, alone, heart pounding, with the chance to prove yourself to a big-time Broadway director. Sound stressful? Yes, the audition can feel like the most anxiety-inducing part of an actor's career, but a bit of preparation is all it takes. In this workshop, we'll discuss and practice monologues, setting you up for audition success.

### W353

#### Ballet

The Black Swan and the White Swan. The Mouse King and the Nutcracker. Ballet is not only one of the most beautiful and expressive forms of storytelling, but is also a foundation upon which to build all of your dance moves. Whether you are new to the art or want a forum in which to practice your pliés, tendus, and arabesques, join us at the barre if you love ballet.

Note: Students should plan to bring their own ballet shoes (no pointe shoes, please).

### W354

#### Latin Dance

Join us as we twirl our way through the hottest dances from the clubs of Cuba, Puerto Rico, and Brazil! Starting with the basic steps of salsa and merengue, you'll learn how to move, sway, and shake your body to different Afro-Caribbean beats.

### W355

#### Live Action Role Playing

Want to be a hero? A villain? What about conquer a new land? In this workshop, you are only bound by your imagination (and your magical powers, of course). Enter a world of fantasy, where you'll transform into character and act out the story with your fellow players. Beware, you might encounter mystical creatures and battle in a knight's tournament along the way. We're not following a story; you ARE the story.

### W453

#### Jazz Dance

Hitchkicks, ball changes, step touches... what is all that jazz? Jazz is featured in everything from Broadway musicals to popular movies, and now you can be a part of it! In this workshop, we will choreograph routines as well as practice solo improvisational dance with some of the basic jazz moves. Come join us to learn the basics of one of the most influential genres of dance in the world.

### W454

#### Sketch Comedy

If making people laugh is your thing, step into the shoes of Tina Fey, Jimmy Fallon, Kristen Wiig, or Will Ferrell and jump on stage! We'll learn about performance techniques, timing and tone, reading the audience, delivering a joke and building a theme as we work in groups to write and perform comedy sketches in the *SNL* and *Chappelle's Show* tradition, using improv games as inspiration.

### W455

#### Stage Combat

Learn what you need to know to stage believable, safe action for theater and other performing arts. We will work on basic falls, rolls, and tumbling, as well as more advanced punches, kicks, hair pulls, and head slams before choreographing realistic fight scenes.

## PSYCHOLOGY, SOCIOLOGY + CULTURE

**W361 / W461**

### Utopias + Dystopias

Have you ever wondered what the perfect world might look like? Or mused on the causes of society's downfall? We'll explore the nature of utopian societies and uncover the role that dystopias play in critiquing social and political structures in current society. From *The Hunger Games* to *Brave New World*, we'll gather examples and build our own structures for a more perfect (or not!) world.

**W362 / W462**

### Psychology Of Harry Potter

If an owl delivered a Hogwarts admission letter to you, in which house would the Sorting Hat place you? What inner, human motives drive Harry, Ron, Hermione, or Professors Dumbledore and Snape to act the way they do? What caused the creation and downfall of Lord Voldemort? In this workshop, we will explore the nature of good and evil, and how the fantastical characters and symbols in one of the world's most beloved fantasy stories parallel our own struggles as Muggles.

**W363 / W463**

### Stress Management Techniques

Some days, you just want to drop everything and go on vacation. Other days, even the vacation sounds like a lot of work. In this workshop, we'll examine ways of coping, from Eastern practices like meditation and yoga to traditional ideas like getting a good night's sleep. After this workshop (and a deep breath or two), you'll be ready for anything the world can throw at you.

**W364 / W464**

### Psychology of Relationships

Why do certain relationships flourish and others flounder? In this workshop, we will examine different types of relationships — family, friends, colleagues, acquaintances, romantic involvements — and deepen our understanding of the psychology that governs our behavior. As a group, we will discuss family dynamics, our unwritten dating and friendship codes, and how the things that we say, do, and project can influence our relationship goals and realities. Join us for an exploration of how we relate to those around us.

**W365**

### Sociology of Social Networks

There's more to social networks than just how many followers or "likes" you have. We'll look at how your networks, influence, and social reputation affects the way your networks interact. Social networks affect not only our personal lives, but also our politics, business, and even the environments we live in. Do you know what your social networks say about you?

**W366**

### Terrorism

Improvised Explosive Devices, biological weapons, and cyber terrorism. As a group of government advisors, through discussions and simulations, we'll determine what makes something an act of terrorism, and examine the ideologies and methods behind acts of political violence and terrorist organizations, such as ISIS. Taking into consideration citizen rights and international policing, we'll craft a government policy to identify and protect citizens while understanding the issues at hand.

**W465**

### Sociology of The Hunger Games

"I don't want them to change me in there. Turn me into some kind of monster that I'm not." Does Peeta succeed in his resolution to stay true to himself? How do the Gamemakers use fear to manipulate the lives of the tributes, and to what end: political gains or entertainment value? Even before Peeta and Katniss enter the Arena, how does the Capitol control the lives of District 13 citizens? As we analyze the characters in the world Suzanne Collins created, we'll also trace parallels to contemporary cultures.

**W466**

### Gender Identity

Toy trucks and Barbies. Chick flicks and action movies. Blue polos and pink dresses. Society is full of gender binaries that assume a lot based on someone's gender — but does that mean these assumptions are right? We'll explore what the concept of gender means for individual, societal, and national identities, and we'll try to define what gender means to us... and what the possibilities are to change the way the world sees gender.

## SCIENCE

### W371 / W471

#### Marine Biology (Double Period)

Get out to the coast and into the lab to explore the host of marine organisms on the Connecticut shoreline — from the city landscape to nearby nature preserves. Between the lab and a few field sites, you will become familiar with organisms large and small, as well as coastal environments that characterize the region.

Note: This is a combination lab and field workshop that will occasionally run from 2:45 p.m. - 4:45 p.m. (through Open Time) to accommodate field trips to explore different coastal environments. Field trips occasionally return after 6:00 p.m. Boots or water shoes are required. Students are also required to bring long pants and close-toed shoes in order to participate in the laboratory components of the workshop.

### W372 / W472

#### Heart Science (Double Period)

A heart beats about 72 times per minute, pumping 5 liters of blood through your body every 60 seconds. That's 700,000 gallons per year! Join us as we delve into the medical science of the heart. In the lab, you'll learn the basics of cardiology, explore heart function and malfunction, discover how to read EKGs, and listen for heartbeat irregularities.

Note: This workshop will occasionally meet for a double period (between 2:45 p.m. - 4:45 p.m, during regular workshop time and Open Time) to accommodate field trips and extended labs. Students are required to bring long pants and close-toed shoes in order to participate in the laboratory components of the workshop.

### W373 / W473

#### Chemistry Lab (Double Period)

Button up your lab coat and make sure your goggles are on tight. In this workshop, you'll discover if it's strontium, calcium, or sodium that makes fireworks explode bright red. From fireworks to glow sticks and even that funky smell when you burn your popcorn, we'll use the equipment in our lab to explore concepts such as spectroscopy, titration, calorimetry, and luminescence to explore the unique chemical structures that make up the world around us.

Note: This workshop will occasionally meet for a double period (between 2:45 p.m. - 4:45 p.m, during regular workshop time and Open Time) to accommodate extended labs. Students are required to bring long pants and close-toed shoes in order to participate in the laboratory components of the workshop.

### W374

#### CPR/AED Certification (\$50)

Emergency response requires quick thinking and immediate actions. As we practice the proper response to cardiac emergencies, we'll master using AEDs to stabilize victims and CPR techniques for victim resuscitation.

Note: Because students have the option to become Red Cross CPR and AED certified if they elect to take the optional certification exam at the conclusion of the training, there is an additional \$50 fee for this workshop.



## VISUAL ARTS

**W381 / W481**

### Stage Makeup

From *The Avengers* to *The Walking Dead*, makeup transforms regular actors into demons, fairies, the elderly, and the walking wounded. If you've ever wanted to try your hand at the magic of makeup artistry, this workshop is for you!

**W382**

### Cinematography

Much of a story told through film can be conveyed without saying a word, through the art and technology of motion picture photography — otherwise known as cinematography. Come learn the different shots, exposures, angles, and movements essential to professional cinematography and use them to tell a story of your own.

**W383**

### Typography

Typography isn't just the study of Helvetica and Palatino fonts, it's the relationship between text and image in design. As art directors, we'll use typeface to craft voice and mood, as well as turn your words into art on the page. By using text to create unique images and themes, you'll leave with your designs saying so much more than just words.

**W384**

### Architecture of Yale

Yale University has been recognized as one of the "world's most beautiful campuses." If you're an architecture buff or just want to explore the hidden gems of Yale's historic campus, join us for an in-depth look at Yale's iconic buildings. We will visit the Art + Architecture Building by Paul Rudolph, the Ingalls Rink by Eero Saarinen, and the Art Gallery and British Art Center by Louis Kahn, as well as many other of the campus's Gothic and Colonial Revival structures, (many of which are right on the Old Campus!). Come join us to learn about the buildings in the place you're calling home for the next few weeks.

**W385**

### Mandala

Come participate in this ritual and meditative practice dating back to 6th century B.C. India. You'll learn the fundamentals of mandala design — radial symmetry, geometric patterns and symbolic imagery — while creating your own, unique sand mandala painting. It'll take a lot of concentration, but the process will open up your eyes (and soul) to new perspectives as you practice this ancient, artistic ritual.

**W482**

### Film Editing (Double Period)

Much of the work of making a film comes after the filming is done. In our Final Cut editing suite, you'll learn how to transform raw stock footage into commercials, music videos, and shorts. By weaving short and long shots together, you'll discover how to pace the telling of the story and put the emphasis where you want it.

Note: This workshop runs from 2:45 p.m. - 4:45 p.m. (through Open Time) to allow students time to develop their projects with their instructor.

**W483**

### Accessory Design

Every fashionista knows that an outfit is more than just clothes — it's how you accessorize! From high-fashion handbags and up-cycled belts and bows, we'll explore the construction and presentation of accessories as we design our own line of products to keep every head turning on the runway.

**W484**

### Art + Antiquities of Yale

Yale University has one of the most impressive collections of art and antiquities in the world. Take advantage of this opportunity to see and study these collections up close, and to delve into the fields of art history, archaeology, and preservation! We will explore the major art galleries on campus (Yale University Art Gallery, the Yale Center for British Art, the Peabody Museum of Natural History) as well as smaller collections at some of Yale's storied buildings. We'll also discuss the conservation and restoration of art.

**W485**

### Digital Self-Portraiture

The art: self-expression. The tools: a digital camera and Photoshop Elements. All artwork speaks about the artist: what is yours saying? We'll face the camera inward as we participate in one of art's most ancient traditions: the self-portrait.

Note: Students enrolling in this workshop are required to bring their own 10-megapixel digital cameras, cell phone and media storage. Disposable or 35mm film cameras are not appropriate.

# Princeton Review

**During the afternoon, you can enroll in two of our workshops or choose to focus on improving your test-taking strategies or study skills for the SAT, PSAT, or ACT with one of our 3-week Princeton Review courses.**

## **EXPLO + the Princeton Review**

Princeton Review courses meet Monday - Friday, 2:45 - 4:45 p.m. each day (with the exception of the second Wednesday of each session). SAT, PSAT, and ACT, students take three full-length exams at 4 hours each. On the days of the exams, Princeton Review students will be required to stay an additional 2 hours to accommodate testing. There is an additional fee for each Princeton Review course. The cost of each course is listed at the bottom of the course description. Students who do not enroll in a Princeton Review course sign up to take workshops during the afternoon academic block.

## **Princeton Review Refund Policy**

Students who wish to withdraw from Princeton Review may do so for a full refund before the second day of the course. Students may next withdraw only after the second Tuesday of the course when the next workshop option becomes available. Those who withdraw at this point will be credited for half the cost of the course.

Students will not be allowed to drop any Princeton Review course without written or verbal permission from their parent to our Registrar's office.

## **SAT Classroom PLUS Course**

**22 hours of instruction and 3 proctored exams  
PLUS PSAT or SAT Wrap-Up**

This course offers an extensive review of Princeton Review methodology as well as access to our SAT Online course with video lessons on every topic covered in class. By the completion of the course, students will have a comprehensive understanding of what to expect on test day, as well as how to handle each question effectively in order to reach their target scores.

PLUS Students also receive:

- > PSAT or SAT LiveOnline Wrap-Up in the fall
- > Copy of The Princeton Review's 377 Best Colleges
- > A Satisfaction Guarantee
- > 10% discount off any Additional Princeton Review Program.

Cost: \$575

## **ACT Classroom PLUS Course**

**22 hours of instruction and 3 proctored exams  
PLUS ACT Wrap-Up**

This course offers an extensive review of Princeton Review methodology as well as access to our ACT Online course with video lessons on every topic covered in class. By the completion of the course, students will have a comprehensive understanding of what to expect on test day, as well as how to handle each question effectively in order to reach their target scores.

PLUS Students also receive:

- > ACT LiveOnline Wrap-Up in the Fall
- > The Princeton Review's 377 Best Colleges
- > A Satisfaction Guarantee
- > 10% discount off any Additional Princeton Review Program.

Cost: \$575

## **PSAT Classroom PLUS Course**

**22 hours of instruction and 3 proctored exams  
PLUS PSAT Wrap-Up**

The PSAT is an important test for a couple of reasons:

First, it's great practice for the SAT and your test results will give you a sense of your strengths and weaknesses. Also, a high score on the PSAT is the only way to qualify for a National Merit Scholarship. This course will introduce students to the concepts on the PSAT as well as test-taking strategies and problem-solving skills.

PLUS Students also receive:

- > A PSAT LiveOnline Wrap-Up in the fall
- > Copy of The Princeton Review's 377 Best Colleges
- > A Satisfaction Guarantee
- > 10% discount off any Additional Princeton Review Program.

Cost: \$575