

# 2016-17 High School Course Catalog

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## Core Courses

### English

**“Composition and Identity”** Instructor - Gabe Johnson

English Requirement

In “Composition and Identity” students will learn and practice foundational writing skills in both non-fiction forms, such as essays and personal narratives, as well as fiction forms such as short stories and poems. The readings for this class will revolve around the theme of *Identity* as it pertains to one’s self and to one’s community, as well as how it relates to less tangible things such as literature, a geographical region, a nation, and even a historical period. We will ask the question, *what does it mean to have an identity at all*. Students will also develop a deeper understanding of the English Language through study of vocabulary and grammar.

**“American Literature and Composition”** Instructor - Gabe Johnson

English Requirement

In English II, students will learn how to craft effective essays through a variety of techniques and improve vocabulary through weekly lessons. Students will explore American literature from the Romantics and Transcendentalists to more modern literature with a focus on civil rights. Students will learn to analyze and understand complex or difficult works through reading comprehension techniques. Students will also be able to explore some of the themes and motifs of the reading selections through creative writing.

**“World Literature and Composition”** Instructor - Gabe Johnson

English Requirement

In “World Literature and Composition”, students will explore a variety of cultures through the literature of the region. Students will read both historical and modern works of literature that reveal deep truths about the diversity of humanity, as well as the similarities we all share. As they take this world tour, students will also work towards developing college level analysis and composition skills, focusing mainly on academic writing. Students will learn to apply filters to a work of literature, and to be able to engage the writing in new and novel ways.

*Prerequisite: Composition & Identity, and American Literature and Composition*

**“Modern Literature and Composition”** Instructor - Gabe Johnson

English Requirement

In English III, students will explore Modern Literature and the themes associated with it. Through a detailed look at some of the most important modern works, students will explore some of the social and environmental issues facing the modern world. Students will also continue to develop their vocabulary and grammar skills through weekly lessons.

*Prerequisite: Composition & Identity, and American Literature and Composition*

## **Mathematics**

### **“Algebra 1”** Instructor- Minal Sonigra

Algebra 1 provides formal understanding of algebraic concepts that are necessary for higher level math courses. In this course, students will learn how to use basic algebraic skills in wide range of problem solving situations. Students will master the concept of function and how to graph linear function by plotting points, using intercept and using slope and y intercept. Students will also learn to solve the system of linear equations by graphing, substitution and elimination method. we will also focus on operations of polynomial, inequalities and non-linear equations. Throughout this course we will focus on real life examples and problems. At the end of the course students will be able to grasp the use of algebra in real life and for further math applications.

*Prerequisites: Math 8*

### **“Geometry”** Instructor- Minal Sonigra

Geometry is a course in logic, proof, and measurement. Students will develop their ability to construct formal, logical arguments and proofs in geometric settings and problems. Some of the topics covered include definitions, postulates, and theorems regarding angles, segments and lines, arcs, congruent triangles, similar triangles, special quadrilaterals, parallel lines, circles, coordinate geometry, area and volume formulas, transformations, constructions, and right triangle trigonometry.

*Prerequisites: Algebra 1*

### **“Algebra 2”** Instructor- Minal Sonigra

This course is designed to build on algebraic and geometric concepts. It develops advanced algebra skills such as systems of equations, advanced polynomials, imaginary and complex numbers, quadratic equations and includes the study of trigonometric functions. It also introduces matrices and their properties. The content of this course are important for students’ success on both the ACT and college mathematics entrance exams.

*Prerequisites: Algebra 1, Geometry*

### **“Pre-calculus”** Instructor- Minal Sonigra

This course is designed to cover topics in Algebra ranging from polynomial, rational, and exponential functions to conic sections. Trigonometry concepts such as Law of Sines and Cosines will be introduced. Students will then begin analytic geometry and introduction to calculus concepts such as limits, derivatives, and integrals.

*Prerequisites: Algebra 1, Geometry, Algebra 2*

### **“Calculus”** Instructor- Minal Sonigra

Calculus is an introduction to differential and integral calculus: the study of change. This course will cover Limit and Continuity, Derivatives and application of Derivatives, Integral and application of integral, Sequences, L’Hopital’s rule and Infinite Series. Calculus emphasizes skills, theory, and applications. Calculus opens doors to higher mathematics, science, and technology.

*Prerequisites: Algebra 1, Geometry, Algebra 2, Precalculus*

### **“Statistics”** Instructor- Minal Sonigra

Statistics help us to analyze the data and make appropriate decision. In this course students will be able to learn the importance of data collection and different methods of data analysis. We will learn permutations and combinations, probability, standard deviation, normal distribution, conditional probability, and how to calculate mean, median and mode. Throughout this course students will work on many real life examples and data. Student will be able to understand the use of statistic in many different fields and professions.

*Prerequisites: Algebra 1, Geometry*

## **Sciences**

### **“Physical Science”** Instructor - Andrew Rabin

Science Requirement

This is a course designed to introduce new high school students to the fundamentals of force and motion, properties and change of matter, and energy conservation and transfer. This course lays a foundation for a more in depth study of chemistry and physics. A major goal of this course is to help students integrate knowledge into function. Students will learn by applying the scientific method, experimentation, and observation to investigate and improve capability and design of everyday objects.

*Prerequisites: 8th Grade Science*

### **“Chemistry”** Instructor - Andrew Rabin

Science Requirement

Students will learn about the chemical and physical properties of matter, energy transfer and conservation, and the study of these major concepts. While learning the scientific language and calculations, students will also gain a global perspective by applying this knowledge with functional design of everyday items found in the world around us. Students will use the scientific method to conduct laboratory experiments, document their work and write reports. For example, students will use their newly acquired scientific knowledge conducting reactions to make soap, “gold” pennies, and hollow penny shells.

*Prerequisites: Physical Science, Algebra I*

*Corequisite: Algebra 2 or Permission of the Instructor*

### **“Physics”** Instructor - Andrew Rabin

Science Requirement

This is a course designed to introduce students to the fundamentals of force, motion, the concept of energy conservation, transfer and work, electricity and magnetism. Students apply Algebra skills to physics problems, observe and manipulate demonstrations, and discuss the application and design of machines.

*Prerequisites: Algebra 1, Algebra 2, Physical Science*

## **Social Studies**

### **“World History”** Instructor - Andrew Saldino

Social Studies Requirement

In this course we will use the Big History Project to structure our investigation into World History. Big History believes that in order to really understand where we are in and what our challenges and opportunities are for the future, we need to contextualize our situation within the the entire history of the universe. We will study the key Threshold Moments in history, from the Big Bang to the emergence of Life on Earth, to the emergence of humans and collective learning through language, to the agricultural and fossil fuel revolutions. In this course, we are constantly probing the past in order to make sense of the present and future.

*Prerequisites: None*

### **“United States History”** Instructor - Andrew Saldino

Social Studies Requirement

Beginning with Pre-Colombian America and continuing up through key events in modern American history, this course seeks to impart multiple objectives: gaining cultural literacy about key events and trends in the history of our nation; providing the tools to be informed participants in American democracy; understanding the significance of the American experiment in the

history of the world, in the past and present; and learning how to read, think, research, write, and speak with the rigor and clarity of a historian. All of these skills provide values that transcend the simple boundaries of a U.S. History course.

*Prerequisites: World History*

**“Economics and Sustainability”** Instructor - Andrew Saldino

Social Studies Requirement

This class has three main components: Personal Finance, Sustainability, and Micro and Macro Economics.

In Personal Finance, students will study career options, education and income levels, how to create a personal and household budget, understanding the value and pitfall of different kinds of debt, savings plans, and how to think about investing for the future. Our second unit will be reading James Speth's book: *The Bridge at the End of the World: Capitalism, the Environment, and Crossing the Bridge to Sustainability*. As we study this book, we will do sections on Micro and Macro Economics in order to understand Speth's argument, and to gain familiarity with these important foundational principles.

In our third unit, students will pick a Design Project to do and present on some topic in Economics and Sustainability. Students will go through a condensed version on an FSP project: choosing a topic, researching, creating a thesis, writing a 5 page paper supporting that thesis, and then creating a presentation of one's thesis for the class.

*Prerequisites: World History, U.S. History,*

**“Government”** Instructor - Andrew Saldino

Social Studies Requirement

In Government, we will begin by considering the nature of power and social structure by reading two classics: *1984* by George Orwell and *Brave New World*. By Aldous Huxley. Then we will switch speeds entirely and carefully read and study the book *Nonviolent Communication* by Marshall B. Rosenberg. With these conflicting images of what humans and society are capable of, we will then work through the non-fiction video resource Crash Course series on Government and Politics in order to understand the basics of our governmental system. Finally, students will embark on a Design Project of their choosing, limited only by our imaginations. All the while, we will have intense and spirited discussions about the interesting political climate that we find ourselves in during this election year.

*Prerequisites: World History, U.S. History,*

## Design

**“Aesthetic Design”** Instructor - Mason Cooley

Design Requirement

Aesthetic Design is a broad introduction into "design thinking" which allows us to see the natural-cultural world as a holistic system. Our experience of the world from this holistic perspective looks more like a web of interconnected people, places and things. How we empathize, understand and ultimately create new relationships through experiencing the vivid patterns of such a dynamic world is integral to this class. Therefore, in class we will be exploring our perception of the world by beginning with key concepts like beauty and the sublime, however, through hands-on projects we will begin to experiment with our perception around the nature of objects that both captivate us but may also have certain hidden histories and stories to tell. In other words, I like to think of this class as a kind of "natural history" of the perceived world through which we use our perception of things in a creative way to design new experiences and create new ways of seeing the environment around us.

"As we experience the world, so we are also experienced by the world." Gregory Cajete

*Prerequisites: None*

**“Material Design”** Instructor - Valerie Wanamaker

Design Requirement

Material Design focuses on the exploration of creative design, in the pursuit of fun or function, through various physical materials. We begin with learning the fundamental concepts and vocabulary of Tectonics in relation to use and aesthetic design. Students will gain skills in observational drawing in order to plan and prototype their creative visions. They will be introduced to skills in Fabrication and Representation that will allow them to effectively communicate ideas in two and three visual dimensions. Students will learn appropriate etiquette and communication in giving a formal critique of their own work, and the work of their peers. The class will take field trips to various galleries and workshops in order to gain insight into practical fields of work/careers supported within material design, . Throughout the course we will utilize the Design Thinking model to analyze design problems critically, and solve them creatively.

*Prerequisites: Aesthetic Design*

**“Environmental Design”** Instructor - Danise Hauser RLA

Design Requirement

This course encourages students to apply the design process within disciplines that offer solutions for human needs within a range of environments. Examples of environmental design disciplines include architecture; landscape architecture; urban planning; and interior design. For each discipline, students will interact with guest speakers who are practicing professionals; analyze a real-world design challenge, then select and present a final design solution. In most cases, the real-world design challenges represent service to our community by responding to an actual local need for analysis and/or design. Students will find opportunities in these challenges to apply principles including technology, sustainability, and/or social justice according to personal interests.

*Prerequisites: Aesthetic, Material Design*

**“Social Design”** Instructor - Valerie Wanamaker

Design Requirement

This is a course that allows students to explore their social role as individuals in relation to their home, community, nation, and world. Beginning with ancient civilizations, we take a close look at what influenced and motivated groups of people to form a society, and re-define the what, how, and why behind “acceptable” or “normal” human behavior from past to present. We investigate the historical impact created by social movements in the United States, and take a look at current events in social activism worldwide. Students will also get a glimpse of what it looks like to have a career within the field of social work by meeting with guest speakers within the profession. Throughout the course students will contemplate, identify, and discuss complex social constructs related to gender, race, culture, and socio-economic status. To further our knowledge, we utilize the Design Thinking methodology through the form of “Design Challenges” where students take the information they learn and come up with essential questions to further investigate and test using the design model.

*Prerequisites: Aesthetic, Material, Environmental Design*

## Language

**“Spanish 1”** Instructor - Christine Eide

Language Requirement

This is a course designed to introduce the student to the Spanish language (Central and South American-based), and Latino culture and history. Students use book work, computers, games and music to learn basic Spanish communication.

*Prerequisites: None*

**“Spanish 2”** Instructor - Christine Eide

Language Requirement

This is a course designed to...

*Prerequisites: Spanish 1*

**“American Sign Language”** Instructor - Don Stringfield, HeartStrong

Language Requirement Alternative

This is a course designed to introduce the student to American Sign Language, deaf culture, and history. The course is taught by a native speaker and is immersion-based. Students have the opportunity to volunteer in programs and attend meetings and clubs in order to utilize their acquired language skills.

*Prerequisites: None*

# Electives

## Academic

### **“Creative Writing”** Instructor - Gabe Johnson

In this elective, students will learn how to plan and execute a longer work of fiction such as a novel or novella. Students will study several techniques and strategies used by master authors and will design and develop their own plan for writing novel or novella and put that plan into action. This class will be focused on writing, editing, revising, and re-writing.

*Prerequisites: None*

### **“Debate & Rhetoric”** Instructor - Megan McCarter

In this course, students will study the history, key figures, strategies and forms of rhetoric. We will explore logical fallacies, argue daily, engage with both classic and popular speeches of history and contemporary culture and politics, and study techniques for improved public speaking. The course will culminate in a Lincoln-Douglas style debate designed and executed by students for a wider audience.

*Prerequisites: None*

### **“Migrations”** Instructor - TBD

This course is designed to explore the definition of migration as movement. Students will start with a study of the movement of land and ancient cultures to current issues with economic and refugee migration. Students will also look at environmental changes, the complexity of anatomy in higher and lower animals, metamorphosis and migrations of insects, the study of genetic markers. Students will also be involved in the research, conservation of monarch butterflies as well as provide educational experiences to younger students.

*Prerequisites: None*

### **“World Religions”** Instructor - Andrew Saldino

In this course, we will study five of the great world religions--Hinduism, Buddhism, Judaism, Christianity, and Islam. We study these religions because of their enduring power and impact for understanding the modern world, as well as the vital resources contained within for understanding how humans have understood the spiritual dimension of their lives. We will read Huston Smith's *The World Religions*, and engage in various experiential educational experiences in these traditions, including taking field trips to religious centers and meeting religious leaders. Students will acquire a sense of the basic history, geography, doctrines, and practices of these religions, as well as having the space to explore their own spirituality in relation to these traditions.

*Prerequisites: None*

## Arts

### **“Art and Math”** Instructor- Minal Sonigra

In this elective course we will focus on integration of art and mathematics. There are three main topics in this course: art and mathematics in culture, art and mathematics in career, art and mathematics in personal interest. For each topic student will do a project. For each project students have to find the topic, choose how art portrays it ( culture, content and personal interest) and discuss the mathematics and art of it. I hope this class will help students see the connection between math, art, different cultures and careers.

*Prerequisites: None*

### **“Music Lab”** Instructor - River Guerguerian

Music, the organization of Sounds and Silences, is one of our greatest forms of communication. Music is about listening to our inner selves and the outer world. The goal of this course is to heighten your musical craft, develop ear training, and

introduce listening strategies to deepen your relationship with music. We will experience different types of world music and their relation to the history of American music, and create our own songs. Students will have access to many instruments, and will have opportunities to record their works and learn about the audio engineering process.

**“Studio Art”** Instructor - Chad Adair

This experimental studio class will explore the limitless possibilities of creativity and innovation in art. All creative interests and collaborations will be considered. While there is no course fee, please note that students may be responsible for purchasing specialized materials or tools for their unique project(s). We will begin by looking at examples of creativity and innovation throughout history. As a class we will brainstorm on ideas, and each student will decide on a concept. The student will research and define the concept to present to the class. Through experimentation, documentation and ideation the student will deliver a completed project. Students will be required to give weekly updates and participate in critiques. This will enable understanding the power of critical analysis for idea development growth. The final project will be presented in an art gallery setting with parents and friends in attendance.

**“Untitled Document”** Instructor - Gabe Johnson

Untitled Document is the name of Odyssey’s literary and arts journal. In this class, students will plan out the conceptual focus of the journal, decide how best to request submissions, find advertisers, edit articles, write articles, work in online media and print media to create this year’s issue of this Odyssey tradition. The journal itself is completely student driven and created and students in this class have a lot of creative freedom in how to make this an amazing product.

**“Yearbook”** Instructor - TBD

This is an after school course open to both High School and Middle School students Tuesday afternoons from 3:30-5pm. We will work as a team to create an awesome Odyssey Community yearbook. There are many opportunities to hone in on your strengths and passions with roles in management, photography, writing, selling, marketing, and graphic design. This class will be full of leadership, collaboration and creativity with a very exciting and concrete end product!