

# Planner: Grades 8–12

## School Year 2017–18

### Purpose

This is a guide for planning a student's course of study for grades 8 through 12. Providing complete course information, it reflects the most recent policies and graduation requirements along with the most up-to-date information available at the time of publishing. Because changes may be made, please check our web site ([www.aa.edu](http://www.aa.edu)) or consult Julie Eckhardt, registrar (828-3207, [eckhardt@aa.edu](mailto:eckhardt@aa.edu)) for the most current policies, requirements, and information. The planner concludes with a worksheet for sketching a long-range course of study.

### The curriculum

The primary academic goals of the Academy are encouraging sound scholarship, independent thinking, discriminating judgment, and clear communication. Across disciplines, the Academy teaches a wide variety of critical thinking skills, asking students to grapple with complex problems and to articulate and defend their solutions with evidence, logic, and reason. The school espouses an ethos of free inquiry. In these ways, Academy students are well prepared for whatever future course they pursue in college and in life. In so doing, the Academy's curriculum emphasizes six basic disciplines: English, history, mathematics, world languages, science, and the arts. Students have a range of elective choices, including online courses through the Global Online Academy (GOA). Most students follow a traditional college-preparatory curriculum.

### Using this planner

Study the listed requirements and electives and then sketch a tentative five-year sequence on the worksheet at the end of the guide. Full information on prerequisites to the various courses appears in the department-by-department section of course descriptions. The final step is to fill out the course selection sheet (provided separately) and to submit it as instructed. For more help, the department chairs listed beneath each department heading can provide clarifications, as can advisers, or the following division heads:

Grades 10–12, Sonia Roth (828-3187, [roth@aa.edu](mailto:roth@aa.edu))

Grades 8–9, Martha Palmer (858-8885, [palmer@aa.edu](mailto:palmer@aa.edu))

Grade 6-7, Chris Dineen (828-3146, [dineen@aa.edu](mailto:dineen@aa.edu))

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## Graduation requirements

Twenty-three and one-quarter credits are required for graduation, with one credit awarded for a full year of study and 1/2 credit awarded for completing a semester course. Normally, credits accrue for courses completed in grades 9-12 (see “Eighth-grade credits” on this page for exceptions). The 23 1/4 credits include the following:

Counseling and human development*	1/2 credit
English	4 credits
Experiential education	1/4 credit
History	4 credits
Languages	3 credits
Mathematics	3 credits
Physical education	3 credits
Science	3 credits
Visual/Performing arts**	2 credits
Electives	1/2 credit

\*1/4 credit if enrolled after grade 8

\*\*1 credit if enrolled after grade 8

NOTE: The languages requirement of three credits must all be earned in the same language.

## Chart of requirements

	8	9	10	11	12
College Guidance			r	r	
Community Service	r	r	r	r	r
English	R	R	R	R	R
Experiential education	r	r			
Health	r		r		
History	R	R	C	C	R
Language	C	C	C	C*	
Mathematics	C	C	C	C*	
Physical education	R	R	C	c	c
Science	R	R	C	C*	
Visual/Performing arts	C	C*			

Key:

R = required year-long course

r = required semester or program

C = choice of year-long required courses

C\* = final year may be taken earlier or later

c = choices of less than a year in length

## Definition of Terms

“Required” refers to courses all students must take (e.g., *Chemistry I* and *Physics I*, the four-year sequences in English and history, eighth- and ninth-grade *PE*, *Health Issues* and *Health Seminar*). “Elective” designates courses that may apply toward basic requirements in various departments and for which students receive credit toward graduation (e.g., *Statistics I* and *II*, *Astronomy*, *Video Art*). The course load for students in grades 10-12 is either five or six courses, not counting health or PE (independent study and Global Online Academy courses count toward that total of five or six courses); all eighth- and ninth-grade students take six courses, one of which is in the arts.

## Eighth-grade credits

Normally, the following courses count toward graduation credit when completed in grade 8 and appear on the student’s transcript:

- Full-year visual or performing arts courses
- any math course above Math 8
- any language level I or higher
- Health Issues 8

No other eighth-grade courses count toward graduation credit, but those courses must be passed for a student to be eligible for graduation.

## Special programs

### Advanced Placement (AP) courses

Students may select courses that prepare them for external national examinations that may result in college credit and/or advanced standing. Registration for AP examinations are done online at the AP Test Service registration site. Each year, approximately 250 Academy students write nearly 550 Advanced Placement examinations in over 20 different subject areas.

### Concurrent Enrollment

In exceptional cases, students have sought and been permitted concurrent enrollment at an approved institution of higher learning. Concurrent enrollment is normally limited to one course per semester and to courses not represented by the Academy’s current offerings. Students concurrently enrolled must take all required courses unless waived by the department chair and approved by the division head. Students interested in concurrent enrollment should see the 10-12 division head for more information. Students are responsible for tuition for concurrent enrollment courses, and no remission of the tuition from Albuquerque Academy is possible.

### Exchanges: Domestic

Academy students may apply to spend spring semester during either their sophomore or junior year attending another accredited independent school. Information on various options may be obtained from the division head for grades 10-12, Sonia Roth (828-3187). In recent years, students on domestic exchanges have primarily enrolled in schools with specialized curricula such as outdoor education, visual arts, or urban studies.

### Exchanges: International

Academy students may apply to spend a year abroad during their junior year. Such opportunities are available through the Academy’s director of international exchanges, Cathy Lydon (828-3136, lydon@aa.edu), who has more information on various options. The application/approval process must be started by mid-October of the previous year, and places in the program are limited to four students annually.

**Independent study**

Students in grades 11 and 12 may apply to undertake on-campus independent study projects for credit, under the supervision of a faculty member from the Academy. The projects are a semester (1/2 credit) or a year (1 credit) in length and count toward the total of five courses required of each student each semester. Address questions to Sonia Roth, division head for 10-12, (828-3187, roth@aa.edu).

**Community Service Requirements**

Students must complete the following service requirements each academic year. See page 11 for details:

**8th Grade**

- One shift of either Academy Service or Campus Care
- Participate in two all-class, off-campus service projects

**9th Grade**

- One shift of either Academy Service or Campus Care
- Participate in one off-campus, small-group service project scheduled throughout the year at the end of the school day

**10th Grade**

- One Academy Service and one Campus Care shift
- Begin Commitment to Service project and accompanying assignments

**11th Grade**

- One Academy Service and one Campus Care shift
- Complete Commitment to Service project, all assignments, and presentation

**12th Grade**

- One Academy Service and one Campus Care shift

**Senior Projects**

Seniors learn first-hand about a profession or topic that interests them, planning and arranging their own active learning experience outside of traditional classes. Projects require the submission of proposals, demonstrations of learning, and self-evaluations. See page 10 for details.

**Think Academy Summer**

Albuquerque Academy Think Summer offers several six-week academic classes for credit: United States History, Algebra I, Geometry, Biology M, and Chemistry II. Students must first obtain written approvals from department chairs, teachers, advisers, and parents. Classes fill quickly on a first-come, first-served basis. Think Summer tuition must be paid in full upon enrollment and may not be charged to a student's regular school-year account. Grades earned through summer credit classes will be listed on the student's transcript and will satisfy graduation requirements; however, grades will not be calculated in the student's GPA. Questions? Call or email the Think Academy Summer Office (858-8811, summer\_mail@aa.edu).

**Summer Global Online Academy**

Summer@GOA Registration begins February 1, 2017. The fee for enrolling in a Summer@GOA course is \$750. Enrollment requires an approved request form submitted to the Site Director and available space in the GOA course.

**College Guidance**

Students will be assigned to one of the three college advisers at the beginning of their sophomore year. Throughout the school year, students in grades 10 and 11 have specific times built into their schedules to meet with their assigned college adviser as a grade-level group. These meetings are informative, engaging sessions that allow students to get to know their adviser while learning about what they should be focusing on given their grade level and progression through the process. Topics and discussions covered during these group meetings revolve around the college guidance sequence. The goal is for students to become familiar and comfortable with the college process while completing important tasks on schedule.

Seniors attend a mandatory Application Boot Camp during the three days before classes start in August. These half-day sessions will focus on getting specific application tasks completed, with a big focus on online applications and essay writing.

Questions regarding college guidance may be addressed to the college advisers listed below:

Rafael Figueroa	828-3218	figueroa@aa.edu
Dean Jacoby	828-3219	jacoby@aa.edu
Donna White	858-8856	white@aa.edu

## Global Online Academy (GOA)

Site Coordinator: Jill Brown 858-8831 brownj@aa.edu

The Academy is a founding member of a consortium of some of the nation's top independent schools that created the Global Online Academy (GOA). GOA began offering online courses in the fall of 2011.

The fee for enrolling in a fall or spring GOA course is \$200 for a one semester-length course. Academy students may enroll in a GOA course as one of their five or six academic courses in a given semester.

Enrollment requires an approved request form submitted to the Albuquerque Academy Scheduler and the Site Director, and is also subject to availability. Successful completion of courses will result in course credit and a grade on a student's transcript. The grade will not be calculated into the student GPA.

Listed below are the courses offered for the 2017-18 school year, both semester-long and year-long options, in subjects ranging from psychology to global health. All GOA courses have synchronous components (when students collaborate together, or work with their teacher at a set time, generally using video conferencing software) and asynchronous components (students choose when to participate).

For more information and the most current list of course offerings, go to [www.globalonlineacademy.org](http://www.globalonlineacademy.org) or contact Jill Brown (brownj@aa.edu, 858-8831), GOA Site Coordinator.

### Year-Long Courses

Arabic Language Through Culture I  
Arabic Language Through Culture II  
Japanese Language Through Culture I  
Japanese Language Through Culture II  
Multivariable Calculus

### Fall Semester Courses

9/11 in a Global Context  
Advanced Topics in Economics  
Applying Philosophy to Modern Global Issues  
Bioethics  
Computer Science I: Computational Thinking  
Creative Non-Fiction  
Digital Journalism  
Digital Photography  
Filmmaking  
Genocide and Human Rights  
Global Health  
Graphic Design  
Introduction to Investments  
Introduction to Psychology  
iOS App Design  
Medical Problem Solving

Microeconomics  
Number Theory  
Poetry Writing  
Power: Redressing Inequity with Data  
Practical Astronomy  
Social Psychology  
Water

### Spring Semester Courses

Abnormal Psychology  
Advocacy  
Applying Philosophy to Modern Global Issues  
Architecture  
Bioethics  
Comparative Politics  
Computer Science I: Computational Thinking  
Computer Science II: Advanced Java  
Computer Science II: Analyzing Data with Python  
Computer Science II: Game Design and Development  
Computer Science II: Introduction to Java  
Digital Journalism II  
Energy  
Entrepreneurship in a Global Context  
Fiction Writing  
Game Theory  
Gender Studies  
Genocide and Human Rights  
Global Health  
Introduction to Psychology  
iOS App Design  
Linear Algebra  
Macroeconomics  
Medical Problem Solving I  
Medical Problem Solving II  
Music Theory and Digital Composition  
Neuropsychology  
Organic Chemistry  
Prisons and the Criminal Law

### Summer@GOA Courses (Summer 2017)

Computer Science I: Computational Thinking  
Entrepreneurship in a Global Context  
Filmmaking  
Introduction to Psychology  
Medical Problem Solving I

Summer@GOA registration begins February 1, 2017. The fee for enrolling in a Summer@GOA course is \$750. Enrollment requires an approved request from submitted to the Albuquerque Academy Scheduler, the Site Director, and available space in the GOA course. Successful completion of courses will result in course credit and a grade on a student's transcript. The grade will not be calculated into the student GPA.

## Departmental offerings

### *Counseling and Human Development*

*Coordinator: Robert Tanner 828-3270 tanner@aa.edu*

The existence of the Counseling and Human Development department reflects the school's commitment to the healthy development of students as they face the inevitable problems of living. The goal of this department is to establish courses, programs, workshops, and activities that promote healthy living and prevent the development of maladaptive patterns. Where problems have developed, individual therapy, support groups, family consults, and referrals are offered to promote growth and change. Of course, confidentiality is maintained within the limits of the law.

#### **Required Courses**

Courses in health are a required part of the curriculum for all students in grades 6, 8, and 10. Because of student requests, as well as research findings, we have grouped students by gender at each developmental level. Females are taught by female counselors; males by male counselors. Three general units typically covered in health classes are: sexuality education, prejudice reduction, and drug and alcohol education. The bulk of the education on those issues usually occurs at home, in families, and in religious and cultural communities. Our goal is to continue that education and encourage students to discuss those topics with their parents. Activities, films, and guest speakers supplement collected articles in the curriculum guide. No text is required.

#### *Grade 8: Health Issues 8*

One-semester course required of all grade 8 students.  
Fall or spring

This course focuses on topics relevant to early adolescents' relationships with family, friends, and the society in which they live. The drug and alcohol unit covers definitions, functions, and the effects of social pressure on decision making. After discussions of family, religious, and cultural values regarding sexuality, students review reproductive anatomy, sexually transmitted diseases, abstinence, and birth control. Students review media portrayals of males and females and the effects of media on adolescent development. The girls' classes also discuss the development of healthy body image and the symptoms and effects of eating disorders.

#### *Grade 10: Health Seminar 10*

One-semester course required of all students in grade 10.  
Fall or spring

This course provides information and activities pertinent to the general health and well-being of sophomores. The curriculum includes four units: alcohol/substance abuse, sexuality, wellness, and relationships. Since the course is designed to meet the students' needs, sections may vary in topic and activity. Situations at school may become the content for classroom discussions, as appropriate. A weekly check-in provides students the opportunity to diffuse the stress of their demanding lives.

## English

Chair: Melanie Peterson 858-8848 peterson@aa.edu

Courses in the English department aim to give students a thorough knowledge of the English language: to enable them to speak and write clearly, think logically, read with comprehension, and develop a lasting appreciation for good literature. In the early grades, the courses divide the study of English into seven major areas: reading, composition, grammar, punctuation, vocabulary, speaking, and listening.

As students progress through the program, more and more learning derives directly from the reading and writing activities themselves. The following descriptions are not intended to be rigid and prescriptive, but flexible and descriptive. The abilities and needs of each class best determine the content and approach, with course descriptions serving as a guide. All students are required to take English every year.

### Required Courses

#### *Grade 8: English 8*

Full-year course required of all students in grade 8.

This course pursues the development of the mechanical aspects of writing, especially in the areas of paragraph organization and support, usage, grammar, and vocabulary. Compositions involve literary analysis, exposition, and creative writing, with parallel emphasis on more precise oral expression through focused classroom discussion and structured oral presentations. The literary curriculum demands careful reading, analysis, and application. Students explore character development, plot structure, style, theme, and historical relevance in order to grow in their appreciation of the beauty and power of well-crafted language.

#### *Grade 9: English I*

Full-year course required of all students in grade 9.

The ninth grade course considers four basic elements: the mechanics of reading and writing, skills in listening and speaking, systematic study of literature, and practice in composition. Students' frequent discussions foster understanding of themselves and others. They read in each genre, aiming at appropriate levels of sophistication, depth, and breadth. They write at least once a week on their readings or their own experience.

#### *Grade 10: English II*

Full-year course required of all students in grade 10.

The tenth grade program focuses on the integration of literature and composition. Students concentrate on expository writing, studying model essays and a variety

of stylistic and rhetorical approaches. As a means of encouraging more graceful writing, students focus on a number of style points such as vivid diction, correct punctuation, parallelism, and the active voice. Throughout the year, students read both fiction and non-fiction closely, for point of view, setting, characterization, theme, plot, denotation and connotation, imagery, literal and figurative language, irony, and tone. On average, students write a substantive piece every other week and work to master skills in self-assessment, revision, and peer editing.

#### *Grade 11: Advanced English III*

Full-year course required of all students in grade 11.

The junior year stresses learning how to read more serious literature in a closely analytical way and learning how to write about it in a scholarly fashion. The course focuses (with the exception of Shakespeare) on American literature to coincide with the study of American history required of all juniors by the history department. The majority of weekly writing assignments concern literature discussed in class or books assigned as outside reading. Other forms of writing include personal essays, journals, short fiction, or poetry. Students scrutinize the elements, structures, and techniques of writing.

#### *Advanced English III/United States History*

Full-year course open to students in grade 11.

This combined course utilizes the parallels in the eleventh grade American studies and English curricula to create an integrated American studies course, which explores the cultural, historical, literary, and musical heritage of the United States. The course is structured around themes of democracy and American ideology, race, immigration and the West. Course material includes primary and secondary sources found in traditional history classes. In addition, the course focuses heavily on the literature, poetry, art, music, and film of America. By engaging in close reading, literary analysis, and analytical writing, students have a chance to explore not only the social and cultural history of America, but also its tradition of arts and letters. Classes are two periods long with two teachers modeling and facilitating intellectual discourse. Teachers focus extensively on the writing process, and students have the opportunity to pursue research projects in some depth throughout the year. This is a collaborative course sponsored by the English and history departments; it fulfills graduation requirements for both subjects for grade 11. Enrollment limited to 21, selected by lottery if necessary.

### **Grade 12: Advanced English IV**

Full-year course required of all students in grade 12. Students will rank their top three choices from the thematic options listed below.

English IV prepares students to read, reason, and write on a mature and scholarly level. The thematic courses are conducted as seminar-style, discussion-based classes, in which each student should expect to contribute regularly to the close reading of the selected text. As a complement to discussion, all sections of the course will be writing intensive; students should expect to write extensively and to produce work in a variety of modes, including analytical, personal, and creative writing. Discussions and assignments will address not only what the authors say, but also how they say it, making the writer's craft an object of study. Finally, each of the thematic courses will include texts from a variety of genres, which may include novels, short stories, films, drama, poetry, non-fiction, and essays. All sections of English IV prepare students to take the Advanced Placement examination in literature and composition if they choose. Teachers offer several review sessions after school in the spring semester to help students prepare for the AP exam.

#### **Option #1— Encounters with the Strange**

*All journeys have secret destinations of which the traveler is unaware. – Martin Buber*

*Bizarre travel plans are dancing lessons from God. – Kurt Vonnegut*

John Gardner, author of *Grendel*, once said that there are only two plots in all of literature: a person goes on a journey, or a stranger comes to town. That implies that the best and most interesting stories tell us about travellers encountering new places, new people, and new ideas. They may have arrived by choice; they may have arrived through circumstances beyond their control (war, imperialism, colonialism); or, like so many in our own land of enchantment, they may not know how they arrived at all. How does encountering something new—something strange, something foreign—change us? Likewise, how might an outsider change a community and the individuals within it? We will consider these questions as we read about strange encounters outside of one's experience. We will read novels, short stories, poems, plays, and essays, including *The Discovery and Conquest of Mexico* by Bernal Diaz (excerpted), *Heart of Darkness* by Joseph Conrad, *Ceremony* by Leslie Marmon Silko, *On the Road* by Jack Kerouac, *Waiting for Godot* by Samuel Beckett, *Songlines* by Bruce Chatwin, and *Alice in Wonderland* by Lewis Carroll. We will write analytic essays, personal essays, and creative pieces.

#### **Option #2—Tempting Fate and Suffering Fools**

In this class we'll read novels, nonfiction, essays, poems, plays, and stories about two commonly cursed obstacles to personal freedom: fate and fools. By fate we mean it all: circumstance, luck, divine intervention, the alignment of the stars; by fools we don't mean jesters or jokers, but those people whose motivations and actions seem to us errant, idiotic, unstable and even diabolical. If the adage is true that we control our destinies, what roles do fate and fools play in our ultimate course? Can we control either? If so, how? If not, then what can we do? Our reading will bring us to many time periods, situations, and characters, including some excerpted episodes of the "benign" knight's quest in *Don Quijote*, the (quixotic?) quest in Sophocles' *Antigone*, the wild violence of *Hamlet*, and the well-known tragedy recounted in Dave Cullen's 2009 book, *Columbine*. Our goal is to encounter the "unpredictable" (both characters and circumstances) in a predictable and careful classroom environment. The glue that holds this course together is Capulet's eternal question in response to his kinsman's foolish rage: "Am I the master here, or you?"

#### **Option #3—Literature of the Mind**

There would be no literature without the existence of mind: that of the writer, the reader, and of the characters in whom we recognize ourselves. There is kind of literature, however, that makes of the mind a theater unto itself, treating the external world as a kind of illusion and the mind itself as the place where the drama of existence plays itself out. In doing so, this literature of mind has anticipated and deepened insights just now being scientifically discovered in neuroscience and psychology. The most prominent of these insights have to do with perception, memory, creativity, dreaming and the nature of consciousness itself. In particular, such neurological works as Oliver Sacks' *The Man Who Mistook His Wife for a Hat* read like modernist fiction. In this course, we will discover the roots of this theater of mind in the ancient Greek tragedies of Sophocles (*Ajax*) and Euripides (*Bacchae*) and in the cult figure of Dionysus and follow its development up to the short theatrical works of Samuel Beckett (*Not-I*). In addition to these authors, students will read works by Shakespeare (*Hamlet*), Kafka ("The Hunger Artist"), Rimbaud (*Illuminations*), Dostoevsky (*Notes from Underground*), Virginia Woolf (*Mrs. Dalloway*), Borges (*Labyrinths*), Joyce (selections from *Ulysses*) and a great variety of poetry as well as relevant selections from contemporary neuroscience. Students will have many opportunities to develop their own creative writing as well as their analytical writing skills.

### Option #4— *Comedy and Humor*

In Aristotle’s *Poetics*, the author asserts that Comedy should not be taken as seriously as Tragedy. To a large degree, this attitude has persisted over the millennia, and informed the curriculum of English classes, which so often focus solely on “serious” literary forms like tragedy. In this course, however, we will take comedy seriously. We will ask the questions: What can we get from Comedy that we don’t get from Tragedy? How does humor simultaneously arise from and reinforce our sense of community and personal sense of identity? How does it help us through our lives? To answer these questions, we will read things that are comedic in the Aristotelian sense, things that are satirical, and things that are just funny. Our readings may include texts by Chaucer, Shakespeare, Mark Twain, Jane Austen, P.G. Wodehouse, E.B. White, Dorothy Parker, Kurt Vonnegut, and Sherman Alexie. And with any luck, we will laugh.

### Option #5 — *The Examined Life: An Introduction to Philosophical Literature*

*The unexamined life is not worth living. –Socrates*

In this course we will examine a variety of literary texts about men, women, and children struggling—often against great odds—to remain human, to find meaning in a world beset by cruelty, indifference, and pain. While these texts reflect the ideas and conflicts of specific individuals and cultures around the world, they also reveal recurring themes that transcend such boundaries, linking us with others in our thinking about our lives. Inherently philosophical, these texts will press us to consider many fundamental questions about the human condition: What is the good life? What is the nature of freedom? Why do humans suffer? What is good and evil? What is love? What is Truth, Beauty, Justice? Are we free agents with the power to transform ourselves or the helpless victims of Nature, of Fate? Is there a purpose to life? Unlike the study of philosophy in the abstract, the literature we will read is lived philosophy, that is, philosophy made manifest in the lives of characters—people—like us. Challenging in its expectations, broad in its scope, and urgent in its appeal, this course is designed to enrich and complicate our understanding of what it means to be human in the world today. Through the thoughtful examination of poems, novels, non-fiction, and plays, this course teaches the interrelated skills of critical reading, thinking, and writing, as well as effective discussion technique.

### Elective Courses

Students who elect any of the following courses must still take the appropriate required course at the same time.

### *Creative Writing*

Full-year elective open to students in grades 11 and 12.

The first semester centers on the practical experience of writing itself with subsequent criticism in groups and individually. The course aims at stimulating students to observe and sense the world around them and to articulate those observations honestly and vividly in their writing. Assignments encourage experiments in several genres—the sketch, poem, and essay. The second semester focuses on the short story and dramatic pieces, as well as on a longer piece. Critique and revision of typed work is the mainstay of the course. Enrollment limited to 18, selected by lottery if necessary.

### *Creative Nonfiction*

One-semester course open to students in grades 10-12 without prerequisite. May be combined with *Creative Speaking* in the spring for a full-year English elective. Fall

This course is designed for students who are interested in developing their skills and finding their voices as they practice the craft of writing nonfiction. Students shape their own topics drawn from personal experiences, interests, and curiosities. As models and sources of inspiration, students read from an anthology of creative nonfiction as well as from supplemental materials. Essay approaches include memoir, travel, reflection, and nature writing. In addition, students have opportunities to work on college essays and participate in national writing competitions. In this workshop-style course, students read all of their work aloud, revise regularly, and learn to respond thoughtfully to their peers. Finally, students learn bookmaking techniques in order to compile their final collection of essays in a book of their own. Students can expect to write eight polished essays.

### *Creatively Speaking*

One-semester course open to students in grades 10-12 without prerequisite. May be combined with *Creative Nonfiction* in the fall semester for a full-year English elective. Minimum enrollment of 7 students. Spring

Does standing in front of the class terrify you? Does even the possibility haunt your dreams? If so, you are not alone and this class is for you. Using a variety of creative speaking activities such as news broadcasts, congressional debates, professional interviews as well as book/movie/music reviews, the class helps you overcome the fear of speaking before an audience with confidence. You will learn skills that will stay with you long past high school and prepare you for the future presentations you will be called upon to make. Additionally, your dreams will be much more restful.

## Experiential Education

Chair: Jessie M. Barrie 828-3305 barrie@aa.edu

The department of Experiential Education supports programs in Outdoor Education, Service Learning, and Sustainability within the context of the school-wide curriculum. A unique feature of the Academy since 1975, the “Ex Ed” department strives to build healthy relationships among students and offers a curriculum rooted in intrapersonal, interpersonal, and environmental skills and growth. The program also seeks to help students to understand their roles as citizens of the Southwest and to develop a strong sense of place within this unique landscape. The outdoor education curriculum is mandatory in grades six through nine. Most programs occur off campus at locations ranging from Bear Canyon the Academy’s 300-acre parcel of wilderness in the Sandia Foothills, to beautiful areas throughout New Mexico and the Four Corners region.

### REQUIRED COURSES

#### Grade 8

The entire 8th grade class participates in a week-long retreat at the beginning of the year designed to allow students and faculty to build relationships as they enter a new division. The retreat provides students the opportunity to immerse in a “mini-intensive course” of their choosing. Courses are experiential in focus and rooted in teacher passion and student interest. Students also spend time as a large group completing class cohesion activities.

#### Grade 9

The Freshman Expedition is the capstone of the required portion of the experiential education curriculum. Throughout the year, small co-educational groups of freshmen participate in a remote backpacking trip in a local wilderness area. Trip locations are determined by water, weather, and permit restrictions. Program goals include: enhanced knowledge and competency in backcountry travel and living skills, development of meaningful peer connections, and intra- and inter-personal skill development.

### Semester Electives

Students in grades 10 through 12 may choose from three credit courses

*Outdoor Pursuits* and *Outdoor Leadership* may count as an elective in Experiential Education (signup for EXP), or may be used to fulfill the physical education requirement (sign up for PHY). In addition to regular class meetings, outdoor trips are required. Students who have scheduling concerns should consult with a department member prior to registering for this course.

### **Outdoor Pursuits: River & Rock**

(Fall: semester-long course)

Outdoor Pursuits will expose students to new outdoor activities and expand their knowledge of outdoor living skills. This course will focus on whitewater kayaking and rock climbing. Students will spend the first half of the semester being introduced to the sport of kayaking. Course topics include equipment, basic paddle strokes, the roll, river reading skills, and safety and group management in river travel. Students are introduced to skills in the Academy pool and will then put those skills to use on a three day mandatory river trip to the Rio Grande near Taos, NM, departing after school Wednesday, September 27 and returning in the afternoon of Saturday September 30. The second half of the semester will focus on rock climbing, including a history of rock climbing, an exploration of different types of climbing, belaying and safety skills, rock climbing equipment use and care. We will explore how to minimize risk while rock climbing, including an introduction to anchors used in top-rope set-ups. The rock climbing section will culminate in a mandatory three-day climbing trip, departing after school on Wednesday, November 29 and returning on Saturday, December 2. Over the semester, students will also further develop outdoor living skills such as tent use and care, cooking on a camp stove, and menu planning for a small cooking group. Given the time this course requires students to be away from other classes, missing a total of four school days and two weekend days, only candidates in good academic standing should consider registering.

### **Outdoor Pursuits: Mountain Biking**

(Fall: semester-long course)

Outdoor Pursuits will expose students to new outdoor activities and expand their knowledge of the outdoors. This course will focus on mountain biking. Whether you’re new to mountain biking or an experienced rider, this class is designed to take your mountain biking skills to the next level. This course will cover essential cycling skills for navigating varied terrain and getting the most out of your bike. Learn trail etiquette, trailside bike repairs, bikepacking techniques and other useful tips to keep you and your bike working well together. Time in the saddle will improve your bike technique, strength and confidence; our goal is that you will be able to go out on your own after this class. The class will include a mandatory four day base-camp style mountain biking trip departing mid-day on Tuesday November 7 and returning on Saturday November 11. You will need a functional mountain bike to participate in this class. Hybrid bikes, BMX bikes, or road bikes will not work. You need a bike with fat tires and lots of traction. All bikes must be approved by the instructor team. Students who make it into the class will be emailed

in the spring to provide time to get bikes approved before the end of the school year. Given the time this course requires students to be away from other classes, missing a total of 3.5 school days and one weekend day, only candidates in good academic standing should consider registering.

### **Outdoor Leadership**

(Year-long course)

Outdoor Leadership is designed to provide students with enhanced outdoor living and travel skills along with an introduction to the competencies and knowledge needed to lead others safely and competently outdoors. The fall semester will focus on greatly deepening and enhancing the skills and experience introduced on the 9th grade Ex Ed trip. Students will learn about expedition planning, navigation, equipment use and selection, food planning and cooking, risk management assessment, Leave No Trace environmental principles, route finding, ultra light backpacking (putting the fun “back” in backpacking), and backcountry travel skills. During the fall, students will put their skills to practice on a mandatory ultralight backpacking trip in the beautiful Canyonlands of Utah (departing on Tuesday October 3 and returning on Saturday October 7). Students will also spend two days hiking with 6th graders and beginning to assume leadership roles. The spring semester will delve more deeply into leadership topics, including leadership styles and qualities, communication, conflict resolution, group management, judgment & decision making, along with effective teaching skills and styles. Students will put their leadership skills to use as a peer leader on a 7th or 9th grade experiential education course (requiring four days/three nights away from school/home) as well as designing and facilitating one after school experience in May on the 6th Grade overnight. Students will have the option to become certified in wilderness first aid, through a weekend course offering. Given the time this course requires students to be away from other classes (total of nine school days and two weekend days over the course of the year), only candidates in good academic standing should consider registering. Students can register for this course either for PE or elective credit.

### **Senior Projects**

Senior Projects is a required program that takes place during the final five weeks of the senior year. Students study an area of particular interest within one of four options: internship, mentorship, seminar, and self-directed project. The first four weeks are for the project itself, and the last week is reserved for *Presentations of Learning*—student presentations to their peers. Continuing in regular classes varies, depending upon the option a student chooses. Many students are enrolled in AP courses during the spring semester and are able to continue in them and/or review during the project month. Students also have the opportunity to continue in extracurricular and co-curricular activities. For specific details about Senior Projects options, please visit the Academy’s web site ([www.aa.edu/seniorprojects](http://www.aa.edu/seniorprojects)), or email the coordinators, Jeremy Johnson ([johnsonje@aa.edu](mailto:johnsonje@aa.edu)) and Mike Hanselmann ([hanselmann@aa.edu](mailto:hanselmann@aa.edu)).

#### **Option #1—Internship**

The most popular option with senior projects is an internship. An internship is an arrangement with an off-campus business or individual in which a student serves as an apprentice or intern, learning a specific trade, profession, or avocation. The purpose of a student’s choice of internship may be to assist in the selection of an appropriate major field of study in college, to explore an occupation of interest, or to pursue a program of formalized instruction that is not offered at the Academy.

#### **Option #2—Mentorship**

A mentorship is focused work, one-on-one with a faculty member in a discipline of interest or particular expertise for the student. Work and supervision occurs on the Academy campus. A student may want to continue work in progress or advance in a field of study beyond what the regular curriculum has offered. The mentorship option is not for students who want to begin work in a new area of interest.

#### **Option #3—Seminar**

Seminars are offered by Academy faculty on-campus, generally with groups of three to eight students. The purpose of a seminar is to explore an idea or topic in depth with one or more faculty as co-learners—to form a “community of inquiry” around a topic that holds the enthusiasm of everyone involved. Topics fall under the general headings of arts, humanities, and sciences, though inter-disciplinary seminars are encouraged. Each seminar group will determine expectations and culminating projects.

### **Option #4—Self-directed Project**

It is rare that a student is granted the opportunity to work independently. Individual students who have an idea for truly exceptional independent work may submit a proposal for a self-directed project. The application process is rigorous—a student must establish very clear goals, objectives, and assessment mechanisms, submit a detailed calendar and bibliography, and employ the research and techniques generally accepted by scholars or professionals in the chosen field of inquiry. The application process and timeline for self-directed work are separate and unique from the general application process.

### **Community and Global Citizenship**

At the core of Albuquerque Academy’s mission is a belief in the fundamental importance of authentic learning and the need to help students use their knowledge to serve and contribute to the community and the world. The community service program at Albuquerque Academy provides a springboard for action, as students are required to integrate community service into their educational journeys. As students progress through the school, they are required to take a leadership role in matching community needs with their own interests and passions. Ideally, this groundwork will help them take initiative and empower them to become service leaders.

**6-7 Division**—Teachers identify community needs and educational goals and establish meaningful service learning activities for students. Activities have included a peer-mentoring program with a local elementary school, a partnership with a local homeless shelter, and environmental initiatives on campus. These required experiences will be scheduled throughout the year during the school day as class activities.

**8-9 Division**—The goal of the community service program in the 8-9 Division is for students to have a positive, engaging, and productive volunteer experience with a local community partner. All 8th grade students must participate in two all-class service projects (one just prior to the 8th grade retreat in the fall, and the other just prior to spring break). All 9th graders are required to participate in one off-campus service project facilitated by the Community and Global Citizenship faculty. These projects will be scheduled throughout the year, mostly during the end of the school day (returning to school by 4:45pm) and periodically on weekends and non-school days.

**10-12 Division**—By 10th grade, students are capable of taking full ownership of the shape and direction of their community service experience by considering how to best harnesses their own skills and passions to support local, national, or international needs. All students must complete a “Commitment to Service” project as a graduation requirement. Students can take a leadership role and initiate their own project, team up with others to address a community need, form a long-term partnership with an existing organization or continue a regular commitment to an organization. The project requirement contains specific components and deadlines, but is flexible to allow students to pursue their own interests. Details on the project requirements will be introduced to 10th grade students in the fall. Students can work independently or in small groups, but they must complete their Commitment to Service project, including all volunteer hours and related assignments, by the fall of their junior (grade 11) year.

**Community Service Recognition:** Students are encouraged to expand their service beyond the hourly requirements. In order to receive recognition, students must log their additional hours of service in the “Honor Society and Lettering” section of the Community Service Canvas page. Recognition will be given as follows:

- Students in the 8-9 Division who complete a total of 20 additional hours of service in a school year will be recognized in the Community Service 8-9 Honor Society.
- Students in the 10-12 Division who complete a total of 40 additional hours of service in a school year will be recognized in the Community Service 10-12 Honor Society.
- Students in either 8-9 or 10-12 Division who complete 150 hours of documented service over the course of these years will receive a letter in Community Service.

### **On-Campus Service**

Like many other non-profit institutions, Albuquerque Academy relies heavily on support to manage its programs, events, and campus. We are grateful for the immense volunteer support from parents, alumni, faculty and staff. In order to educate our current students about the school’s need and the importance of giving back to our Academy community, the following on-campus service is required of all 8th -12th grade students. Academy Service and Campus Care participation is tracked by the grade deans.

### 8-9 Division Requirements

- One shift each year of EITHER Academy Service or Campus Care

### 10-12 Division Requirements

- One shift of Academy Service
- One shift of Campus Care

All 10th -11th graders sign up for one Campus Care shift at the beginning of the year, and Seniors complete their Campus Care shift together as a class prior to Senior Retreat.

### Academy Service Includes:

- Supporting Admissions events and activities (e.g., Open House, buddy shifts, etc.)
- Concessions shifts
- Supporting teachers and staff with projects pre-approved by class deans
- Assisting at Charger athletic events (cannot be your own sport and not during class time)
- Academic exchange hosts (home hosts do not receive Academy Service credit)
- Dances and other class/division event set-up and clean-up (class officers do not receive Academy Service credit for this)
- Other campus event assistance (e.g., Diversity Day, Read Recycle, lost and found, etc.). Credit will not be given if the event is supporting one's own team/group.

### Campus Care Includes:

- Academy gardens
- Building cleaning and/or maintenance
- Clean-up of campus mesa
- Bear Canyon projects

For further information please call or email Dara Johnson, Director, Community and Global Citizenship (505-828-3277); johnsond@aa.edu, Brown Hall, Room 500).

## History

Chair: Rolf Lokke 828-3253 lokke@aa.edu

History instruction at the Academy includes courses in world and American history and in a variety of allied social sciences. Attention is given to social science methods and research techniques; exposure to world history in a three-year sequence; training in United States history; and in the final year, an introduction to great books and ideas through the Senior Humanities course. In this seven-year required sequence, and through an array of supporting elective offerings in the upper grades, the department above all seeks to nurture each student's enjoyment of history; teach a body of knowledge; practice the skills of research and writing; and develop critical thinking. The department encourages students to reflect on motive forces in history, to develop their own questions about the meanings of the past, and to cultivate a sense of social concern for, and engagement in the wider society in which they live. As suggested by the Academy's mission statement, the department's objectives are to open the door to students' understandings of who they are, where they came from, and in the light of the self-understanding this affords, to serve the wider community with informed conviction.

The offerings in the history department fall into two categories:

- Full-year required courses (history is required each school year.)
- Full-year electives

### Required Courses

#### *Grade 8: World History to 800 C.E.*

Full-year course required of all students in grade 8.

This course, which covers prehistoric humans to the Byzantine Empire, is the first of a required three-year world history sequence. Study begins with a simulated archaeological dig of various ancient world cultures. Students then study human prehistory through the prism of physical and cultural anthropology, the turning point of the Neolithic Revolution, and the beginnings of civilization in Mesopotamia. Focus continues on the advancements in civilizations in: Egypt, Persia, Phoenicia, the Levant, and ancient China. In addition, there is a detailed study of the classical world of Greece, including the Hellenistic period and Rome in the second semester. The course concludes with the transition from Late Antiquity into the early Medieval period, including the study of the Byzantine Empire centered in Constantinople with Justinian. Other areas of study can include early African societies, India up to the Gupta Empire, and the Americas. The basic elements of problem solving, research, writing (including a 4-6 page term paper), oral presentations, and group process are fundamental to this course.

#### *Grade 9: World History to 1789*

Full-year course required of all students in grade 9.

This course continues the survey of world history initiated in the eighth grade, covering a spectrum of cultures and histories across the globe. In Europe, students examine the inception of many of the attitudes and institutions familiar to modern Western peoples, following a line of inquiry from the Middle Ages to the era before the French Revolution. Those studies include a significant individual and group project, culminating in an all-day event—Medieval Day—when students both dress as historical characters whom they have researched and participate in an array of offered courses on medieval topics. Another important topic of study is the emergence of Islamic culture as a major player on the world stage to the establishment of the Ottoman Empire.

In Asia, the focus shifts to examination of the Chinese dynasties from the Tang to the Ming, and emphasis is also given to India and Southeast Asia. Students continue their global inquiry with critical consideration of the Americas and Africa.

Finally, students engage in the study of a theme which weaves throughout the curriculum—a nascent global economy and the beginnings of widespread global contacts and trade networks. Essential skills emphasized in this course include research and analytical writing, leading to an 7-9 page thesis-driven term paper, critical reading of secondary and primary sources, preparation of oral presentations, seminar-style discussion, group work, and appropriate use of technology.

#### *Grade 10: World History since 1789*

Full-year course required of all students in grade 10.

Sophomores may substitute either AP European History or AP World History for this required class, with approval from a student's current history teacher or the department chair. Sophomores may take at most one AP history class.

This course concludes the world history sequence. Beginning with an analysis of the causes of the French Revolution, followed by an investigation of nation-building and the industrial revolution in Europe, students then focus on Africa and Asia in the age of Imperialism. The first semester concludes with the era of the world wars and case studies of the Russian and Chinese Revolutions. The second semester focuses on the contemporary world, starting with a survey of the Cold War and a unit on economic principles relevant to historical study. Students investigate India and Pakistan since the 1920s,

and contemporary regional issues such as the emergence of new global economic powers like China, Russia, and Brazil and development in Latin America. Finally, students engage in one 20th Century thematic study, such as environmental history or the rise of global electronic communications. Essays, discussion, presentations, critical reading of primary sources, group work and a significant individual research project are the common activities students engage in to help to answer historical questions, leading up to participation in a simulated United Nations conference in the spring.

#### **Grade 10: AP World History**

Full-year course.

Students may substitute this course for World History since 1789 with approval from students' current history teacher or the department chair. Students who have not earned a semester grade of 88 or above in both History and English during the current year will need to pass a historical source reading and writing exercise to enroll in this course.

AP World History is a challenging introductory college-level course and is best-suited for students with already well-developed critical reading, writing, and study skills. Students should be prepared to do about 45 minutes of reading and note-taking homework per class period, perhaps more, depending on their reading speed.

*Advanced Placement World History* covers human history from 8000 BCE to the current day. The course is divided into eight major chronological eras within which general trends in political and social organization, technological knowledge and advancement, and cultural and religious trends are explored. In addition, several civilizations around the globe are highlighted within each era. Some examples include the familiar Mesopotamian civilizations, the politics of Europe to World War II, the Chavin in South America, and the pre- and post-colonial countries in Sub-Saharan Africa.

This wealth of information will be gathered from critical analysis of both primary and secondary sources including historical documents; maps; statistical information; and art, music, and other artifacts. While the goal of any Advanced Placement course is, at one level, to prepare for the national exam, AP World History primarily seeks to prepare the student to live and work in the global economy that will be the 21st Century.

#### **Grade 10: AP European History**

Full-year course.

Sophomores may substitute this course for World History since 1789, provided it is approved by students' current history teacher or the department chair. Students who have not earned a semester grade of 88 or above in both History and English during the current year will need to pass a historical source reading and writing exercise to enroll in this course.

AP European History is a challenging introductory college-level course and is best-suited for students with already well-developed critical reading, writing, and study skills. Students should be prepared to do about 45 minutes of reading and note-taking homework per class period, perhaps more, depending on their reading speed.

This course surveys European history from the early Renaissance to the early 1990s and prepares students for the annual Advanced Placement European History examination. Significant events in the development and growth of nations provide the chronological background while attention is focused on how nations and societies were organized, how people lived their lives, and what people thought and wrote about the times in which they lived.

In addressing fundamental issues in European politics and diplomacy, intellectual and cultural life, and social and economic change, students will critically examine a wide variety of historical evidence, ranging from substantial primary source readings to statistical information. Principle themes include the shift in social structure from hierarchical orders to modern social classes; major trends in literature and the arts; the extension and limitation of personal, economic, and political rights and liberties; industrialization; forces of political protest, reform and revolution; developments in science and technology and their consequences; and continuity and change in religious attitudes, family structure, and gender roles.

#### **Grade 11: United States History**

Students choose either *United States History*, *Advanced Placement United States History*, or a combined *United States History/English III*.

**United States History**

Full-year course open to students in grade 11.  
(Also offered for credit during Think Academy Summer.)

This course emphasizes the structure and function of the United States' government, and provides this study in the context of a narrative history of the United States, with the main emphasis on the period from 1776 to the present. Presidential and party politics, landmarks in congressional legislation, Supreme Court decisions, diplomacy, foreign relations and treaties, wars and foreign interventions all find treatment in a survey of the American experience. Included also is discussion of the economic, social, and cultural history and policy in America, and the interaction of the state and federal levels of government. Students are expected to develop analytical reading and writing skills, and to interpret primary sources.

**AP United States History**

Full-year course open to students in grade 11 with approval from the student's current history teacher or the department chair. Students who have not earned a semester grade of 88 or above in both History and English during the current year will need to pass a historical source reading and writing exercise to enroll in this course.

AP United States History is a challenging introductory college-level course and is best-suited for students with already well-developed critical reading, writing, and study skills. Students should be prepared to do about 45 minutes of reading and note-taking homework per class period, perhaps more, depending on their reading speed.

This course is designed to provide students with a learning experience equivalent to that obtained in college-level surveys of American history. While the course begins with the fifteenth-century arrival of Iberians in North America, the early focus is on British North America; the course proceeds chronologically from Jamestown and Massachusetts Bay to the Vietnam era, generally ending with the financial crisis and international conflicts of the early 2000s. Such a broad coverage requires disciplined effort on the part of the student; the reading load is moderate, but there is considerable emphasis placed on the mastery of the factual details. Students will learn how to use primary source materials, and regular in-class document-based essay writing not only assists students in preparing for the AP exam, but also sharpens reading, writing, and critical thinking skills. Students are expected to take the AP exam in May.

**Advanced U.S. History/English III**

Full-year course open to students in grade 11.

This combined course utilizes the parallels in the eleventh grade American studies and English curricula to create an integrated American studies course, which explores the cultural, historical, literary, and musical heritage of the United States. The course is structured around themes of democracy and American ideology, race, immigration and the West. Course material includes primary and secondary sources found in traditional history classes. In addition, the course focuses heavily on the literature, poetry, art, music, and film of America. By engaging in close reading, literary analysis, and analytical writing, students have a chance to explore not only the social and cultural history of America, but also its tradition of arts and letters. Classes are two periods long with two teachers modeling and facilitating intellectual discourse. Teachers focus extensively on the writing process, and students have the opportunity to pursue research projects in some depth throughout the year. This is a collaborative course sponsored by the English and history departments; it fulfills graduation requirements for both subjects for grade 11. Enrollment limited to 21, selected by lottery if necessary.

**Grade 12: Advanced Senior Humanities**

Full-year course required of all students in grade 12.

Senior Humanities is an exploration of the history of human thought. It is an opportunity to learn how to think critically, perceptively, and independently about the deepest questions connected to the human experience in a seminar setting. The course's method is grounded in close reading of original texts, asking good questions, and engaging in thoughtful dialogue. Students examine a variety of issues in politics, ethics, epistemology, and social theory. Readings typically include seminal works of Plato, Aristotle, Rousseau, Nietzsche, and Freud, among others. Classwork in Senior Humanities is supplemented by a biweekly seminar called "Thinking in Common (TIC)," which all seniors attend together. The TIC seminars present examples of art and music from the Western and non-Western traditions allowing students to experience the richness of artistic expression from the eras in which the course's texts were written.

## History Electives

All electives are designed primarily for students in grades 11 and 12, though qualified sophomores may enroll with permission. There are no prerequisites for any electives except good standing in previous history courses. Enrollment in electives does not excuse students from the department's required courses.

### ***AP Art History***

Full-year elective open to students in grades 10-12. Sophomores must have the permission of the instructor.

This course is a survey of art history from the pyramids to the present. Works of painting, sculpture, and architecture are examined as reflections of their cultural contexts and as indicators of the ideas and themes of their times. Considerable emphasis is placed upon careful visual analysis of form and content in order to reveal connections between art and politics, religion, technology, economics, and social issues. Slide lectures are the primary vehicle for discussion, and museum trips add a real-life dimension to viewing and analyzing art. The course focuses largely on Western art but also addresses selected topics in the art of Asia, Africa, and the Americas. Areas of emphasis includes art and politics in the classical world, faith and humanism in the Renaissance, and pluralism, conflict, and abstraction in the 20th century. Topics such as race, politics, and gender figure prominently in class discussions. This course prepares students to take the Advanced Placement examination in art history. There is no prerequisite course but either a keen interest in history OR experience in the visual arts is helpful. The course is offered by both the visual arts and the history departments; it may fulfill either an art credit or history elective credit at the student's discretion. Studio visits and museum tours are an important part of the curriculum of the advanced visual arts classes. Participation in class trips is required for students enrolling in advanced level courses.

### ***AP Comparative Government and Politics***

Full-year course open to students in grades 10-12. Sophomores must have the permission of the instructor.

AP Comparative Government is a challenging introductory college-level course and is best-suited for students with already well-developed critical reading, writing, and study skills. Students should be prepared to do about 45 minutes of reading and note-taking homework per class period, perhaps more, depending on their reading speed.

The goal of this course is for students to develop a thorough understanding of the world's various political systems. To this end, students compare the governments of six important nations: China, Great Britain, Iran, Mexico,

Nigeria, and Russia. Students learn the fundamental concepts of political science, including sovereignty and national strength; political institutions; the citizen and the state; political and economic change; and public policy. Particular emphasis is given to understanding how nations interact with each other through their respective foreign policies. During the fall semester, students focus on China, and participate in the International Negotiation Project (INP). In late November, budget permitting, students travel to Whittier College in California to participate in the INP summit meeting. Students taking this course are well prepared for success on the AP exam in May.

### ***AP Micro/Macro Economics***

Full-year elective open to students in grades 10-12. Sophomores must have the permission of the instructor.

AP Economics is a challenging introductory college-level course and is best-suited for students with already well-developed critical reading, writing, and study skills. Students should be prepared to do about 45 minutes of reading and note-taking homework per class period, perhaps more, depending on their reading speed.

This course is a survey of the fundamentals of modern economic theory, which prepares students for the Advanced Placement examinations in microeconomics and macroeconomics. While the majority of the course is devoted to macroeconomic issues (supply-demand theory, general price theory, income measurement and national income determination models, business cycles, banking, and international trade), the course also covers fundamental microeconomic topics (theory of the firm, optimal pricing, business organization, monopoly, market failure, and regulation). Significant time is devoted to contemporary issues in public policy and international economics through discussion, supplementary reading, and research projects. Growth theory, economic history, and alternate economic systems are also covered. While there is no formal prerequisite for this course, students enrolling in AP Micro/Macro Economics should have a reasonable grasp of geometry and basic algebra and be comfortable with the interpretation of graphs.

### ***AP European History***

Full-year elective open to students in grades 10-12. Sophomores may substitute this course for World History since 1789 provided it is approved by the department chair. Students who have not earned a semester grade of 88 or above in both History and English during the current year will need to pass a historical source reading and writing exercise to enroll in this course.

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In addressing fundamental issues in European politics and diplomacy, intellectual and cultural life, and social and economic change, students will critically examine a wide variety of historical evidence, ranging from substantial primary source readings to statistical information. Principle themes include the shift in social structure from hierarchical orders to modern social classes; major trends in literature and the arts; the extension and limitation of personal, economic, and political rights and liberties; industrialization; forces of political protest, reform and revolution; developments in science and technology and their consequences; and continuity and change in religious attitudes, family structure, and gender roles.

### ***AP World History***

Full-year elective open to students in grades 10-12. Students may substitute this course for World History since 1789 with approval from students' current history teacher or the department chair. Students who have not earned a semester grade of 88 or above in both History and English during the current year will need to pass a historical source reading and writing exercise to enroll in this course.

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the politics of Europe to World War Two, the Chavin in South America, and the pre- and post-colonial countries in Sub-Saharan Africa.

This wealth of information will be gathered from critical analysis of both primary and secondary sources including historical documents; maps; statistical information; and art, music, and other artifacts. While the goal of any Advanced Placement course is, at some level, to prepare for the national exam, AP World History primarily seeks to prepare the student to live and work in the global economy that will be the 21st Century.

### ***The History of the Universe***

Full-year elective open to students in grades 11 and 12. Prerequisite: one science course at the 10-12 level and one history course at the 10-12 level.

This is a joint science and history course that explores the astonishing story of how the universe came into being and how it has evolved into the reality we know today. The course investigates the Big Bang, the formation of the earth, the development of life, the evolution of human beings, the rise of civilization, the scientific revolution, and the discovery of the mind. The examination of each of these areas is not meant to be exhaustive, but will sample readings and other media, which highlight the significant developments during each era. Along the way, students will acquire an educated layman's knowledge of several key scientific theories in various disciplines including cosmology, geology, biology, chemistry, physics, paleontology, anthropology, and neurobiology, while avoiding a rigorous mathematical approach. The course seeks to enrich the investigation of this scientific timeline with a historical and philosophical perspective, through an investigation of the fundamental forces that drove the development of civilization, and humanity's never-ending quest to explore and make sense of the world around it.

The course is set up as a seminar. There will be a few lectures to introduce the key ideas for each unit, followed by selected readings and discussion to further develop the framework. Students will pursue small research projects to flesh out their exploration and present what they have learned to the entire class. The course is best suited for students who are comfortable pursuing their own learning through reading, discussion, synthesis, and presentation.

## Mathematics

Chair: Paul Demers 828-3294 demers@aa.edu

The mathematics department strives to develop a broad understanding of the nature of mathematics by balancing the how's and why's of the subject. The department seeks to develop in students an understanding of the fundamentals and structure of a mathematical system; a working understanding of mathematics' inductive and investigatory processes; individual problem-solving skills and a realization that understanding a problem-solving process may be more important than the results; and a level of competence, which enables them to advance confidently to and succeed in higher mathematics. All students in grades 8-12 must complete a minimum of a three-year sequence of study in mathematics, through at least Algebra II/ Trigonometry or Trigonometry/ Precalculus. By the end of the first marking period of Mathematics 8, all students are required to have graphing calculators; we recommend the use of a Texas Instruments TI-84 Plus. Any of the TI-84 Plus versions are acceptable. For example, the TI-84 Plus, TI-84 Plus C, and the TI-84 Plus CE are acceptable. Silver Editions of these versions are also acceptable.

### *Pre-Algebra/Mathematics 8*

Full-year course open to students in grade 8; designed for the transition from pre-algebra to algebra.

The course covers order of operations, properties of algebra, divisibility, prime factorization, techniques to determine greatest common factors and least common multiples, arithmetic operations with rational numbers, ratios, proportions, percents, and percent of change. Upon completion of these prerequisites of algebra, the course offers many of the concepts found in the full-year Mathematics 8 curriculum, such as equations, inequalities, weighted averages, functions, graphs of linear equations, and polynomials. Emphasis is placed on the development of number sense as well as algebraic manipulative and problem-solving skills in order to prepare students for the full-year course Algebra I in grade 9.

### *Mathematics 8*

Full-year course open to students in grade 8.

This beginning algebra course covers equalities, inequalities, polynomials, functions, graphs of linear equations and linear inequalities, rational expressions and the properties of algebra. Emphasis is placed on the development of algebraic manipulative and problem-solving skills and the relating of mathematical concepts to one another.

### *Algebra I/Geometry for Eighth Only*

Full-year course for students in grade 8 only.

This course is for eighth-grade students who have already successfully completed the Mathematics 8 course content at the Academy. The first semester includes a brief review of the algebra covered in that course, followed by a study of roots and radicals, quadratic equations, systems of equations, laws of exponents, and applications. The second semester begins a study of geometry, including introduction to geometric proofs, congruent triangles, geometric inequalities, perpendicular and parallel lines, and concepts of similarity.

### *Algebra I*

Full-year course open to all students in grade 9 who do not have previous algebra experience or for those who would benefit from further exposure to the concepts; fulfills the first year of the graduation requirement. (Also offered for credit during Think Academy Summer.)

### *Algebra I/Geometry*

Full-year course for students in grade 9; fulfills the first year of the graduation requirement.

This course is for students who have successfully completed the eighth-grade course at the Academy. The first semester includes a brief review of the algebra covered in that course, followed by a study of roots and radicals, quadratic equations, systems of equations, laws of exponents, and applications. The second semester begins a study of geometry, including introduction to geometric proofs, congruent triangles, geometric inequalities, perpendicular and parallel lines, and concepts of similarity.

### *Geometry/Algebra II for Ninth Only*

Full-year course for students in grade 9 only who have satisfactorily completed *Algebra I/Geometry*; fulfills the second year of the graduation requirement.

The first semester is a continuation of the study of geometry. After a review of congruences, inequalities, parallel and perpendicular lines, and right triangles, the concepts of coordinate geometry, areas, volumes, circles and spheres, constructions and transformations are covered. The second semester is devoted to a study of the following topics: polynomials, rational expressions, first and second degree equations and inequalities, functions, graphing, exponents and radicals, and complex numbers.

**Geometry**

Full-year course for students who took *Algebra I* or who entered the Academy in grade 10 with one year of algebra; fulfills the second year of the graduation requirement. (Also offered for credit during Think Academy Summer.)

The course incorporates space relationships in a detailed study of plane geometry. Emphasis is given to the writing of proofs and to employing the concepts of congruence, inequalities, perpendiculars, parallels, areas, similarity, circles, spheres, volumes, and coordinate geometry.

**Geometry/Algebra II**

Full-year course for students who have satisfactorily completed *Algebra I/Geometry*; fulfills the second year of the graduation requirement.

The first semester is a continuation of the study of geometry. After a review of congruences, inequalities, parallel and perpendicular lines, and right triangles, the concepts of coordinate geometry, areas, volumes, circles and spheres, constructions, and transformations are covered. The second semester is devoted to a study of the following topics: polynomials, rational expressions, first and second degree equations and inequalities, functions, graphing, exponents and radicals, and complex numbers.

**Algebra II/Trigonometry**

Full-year course for students who have successfully completed *Geometry*; fulfills the third year of the graduation requirement.

The first semester reviews the structure and properties of the real number system and then extends those concepts to complex numbers. A thorough investigation of the solutions of first and second degree equations and inequalities is followed by a study of properties of functions and graphing. The concept and theory of polynomials are then considered. The second semester deals primarily with the properties and applications of non-algebraic operations, including exponential, logarithmic, and trigonometric functions.

**Advanced Trigonometry/Pre-Calculus**

Full-year course for students who have successfully completed *Geometry/Algebra II*; fulfills the third year of the graduation requirement.

This course is designed to prepare students for the study of calculus. A review of the topics studied in *Geometry/Algebra II* is followed by a thorough development of trigonometric, exponential, and logarithmic functions and their applications, matrices, analytic geometry, induction, series and sequences, and probability and statistics.

**Advanced Trigonometry/Precalculus Through Modeling**

Full-year course for students who have successfully completed *Geometry/Algebra II*; fulfills the third year of the graduation requirement.

This course is designed to prepare students for the study of calculus; it covers the same topics as *Trigonometry/Precalculus*. The core topics necessary for further study of mathematics are introduced through a focus on modeling real-world problems and discovering the tools for their solution through group-based inquiry. Applicability of the mathematical concepts, their relation to realistic data, and higher-order thinking about them are stressed throughout, while practice with techniques is de-emphasized.

**Math Analysis I and II**

One- or two-semester elective open to students in grade 12; successful completion of the first semester is prerequisite to the second.

A course for those who are not prepared for, or do not wish to take, an extensive study of calculus, but who desire a continued study of mathematics in preparation for college. Several topics covered during the previous year's course are reviewed and extended. In addition, some detailed work with analytic geometry, complex numbers, trigonometry, and exponential and logarithmic functions is required. New topics include elementary probability, mathematical induction, and an introduction to limits and the concepts of differential and integral calculus.

**AP Calculus AB**

Full-year advanced placement elective for students who have successfully completed *Trigonometry/Pre-Calculus* or its equivalent.

This course is equivalent to that offered as the first course by many colleges. A solid background in trigonometry and analytic geometry is required. The first semester is devoted to the study of limits, continuity, derivatives, and applications of the derivative for algebraic functions. The second semester is devoted to an introduction to the indefinite integral, transcendental functions, the definite integral and its applications, methods of integration, and parametric equations. Preparation for the *Advanced Placement Calculus AB* examination is one objective of the course.

### ***AP Calculus BC***

Full-year advanced placement elective for students who have successfully completed *Trigonometry/Pre-Calculus* or its equivalent.

This course extends the *Calculus AB* syllabus to include more involved techniques of integration, polar coordinates, vectors and parametric equations, sequences, and series. Preparation for the *Advanced Placement Calculus BC* examination is one objective of the course.

### ***Advanced Multivariable Calculus I***

One-semester elective open to students who have successfully completed *AP Calculus BC*. Fall

This is the first semester of a two-semester sequence which presents a thorough, sophisticated course in multivariable and vector calculus. Linear algebra is integrated into both courses, allowing a unified treatment of many of the concepts of calculus, and extension of those concepts to  $n$  dimensions. Topics from the fields of ordinary and partial differential equations are also treated in an integrated fashion throughout both courses. While complete rigor is not the goal, we do not sweep the subtleties of the subject under the rug, and students get experience writing simple proofs. The pace of both courses is designed to allow students to look at each topic deeply, investigate applications, and address challenging, meaningful problems. The fall semester course begins with a brief introduction to linear algebra and then covers differential calculus of several variables.

### ***Advanced Multivariable Calculus II***

One-semester elective open to students who have successfully completed *Enhanced Multivariable Calculus I*. Spring

This course begins with a deeper look at calculus as applied to vector fields, with an emphasis on the fundamental theorems of Gauss, Green, and Stokes. We then cover the basics of differential equations. We will emphasize the interaction between exact analytical techniques and qualitative analysis. The latter involves both theoretical tools and numerical computations on a computer. We will not only investigate ordinary differential equations and systems (one independent variable), but also get a taste of partial differential equations (two or more independent variables).

### ***AP Statistics***

Full-year elective is offered to students who have completed *Algebra II/Trigonometry* or *Geometry/Algebra II*. Anyone taking *AP Statistics* must have a TI-84 Plus

calculator. Any of the TI-84 Plus versions are acceptable. For example, the TI-84 Plus, TI-84 Plus C, and the TI-84 Plus CE are acceptable. Silver Editions of these versions are also acceptable.

The study of statistics is invaluable in part because of its frequent use in the sciences and social sciences and also because it is extensively referenced in reading web sites, newspapers, books, and magazines. *AP Statistics* is an engaging course that develops powerful mathematical tools for working with the randomness and variation all around us. The aim of the course is to foster statistical literacy and thinking. This course helps students to explore real data, plan and conduct studies and experiments, examine random phenomena using probability and simulation, and study and implement statistical inference. Extensive use of graphing calculators and computer software to help develop concepts, analyze data, and foster active learning are employed.

### ***Advanced Logic and Probability***

Full-year elective open to students in grades 11 and 12 without prerequisite, and to students in grade 10 with permission of the department chair.

Mathematics has made significant contributions to the study of reasoning. The ability to reason well, construct a valid proof, and comprehend the subtleties of statistical and probabilistic arguments, is essential to achieving excellence. The first semester of this course develops the syntax and semantics of sentential and predicate logic, enabling students to translate arguments into symbolic notation, determine their validity, and reveal their structure. The second semester shifts to a study of probability, its foundation in combinatorics, and its role in statistics. By examining the philosophical interpretations of probability, students will increase their understanding of scientific reasoning. There are direct connections to many fields of study: law, debate, critical thinking, philosophy, linguistics, artificial intelligence, and neuroscience. Through mathematical logic and probability theory, students acquire a firm grasp of deductive and inductive reasoning.

## **Performing Arts**

Chair: Richard Hogle 828-3315 hogle@aa.edu

Studies in the performing arts are designed to help students acquire fundamental knowledge and conceptual understanding in dance, drama, and music; the progressive, sequential development of skills in singing, playing instruments, acting, and movement arts; and finally, the application of this skill and knowledge in performance of high quality repertoire. Individual growth, the process of collaborative learning, and the performance experience are stressed as integral components. Students emerge with first-hand experience in self-expression and communication through the performing arts, an aesthetic appreciation for the similar expressions of others, and an awareness of the inter-connectedness that exists between the performing arts and other disciplines.

Please direct all performing arts questions to Richard Hogle, Performing Arts chair (828-3315, hogle@aa.edu).

### **Theatre Arts Courses**

All theatre courses are year-long.

#### ***Introduction to Theatre***

Full-year elective open to students in grades 8-12.

In addition to working on acting and the creation of strong, convincing characters, this course provides basic exercises in lighting, makeup, set and costume design, directing and stage management. At the end of the year, students form a theatre company producing a public performance illustrating their mastery of each area of study. The course is intended to give students a broad background in all areas of theatre study, providing a basis for continued study in areas of most interest to them.

#### ***Acting Styles***

Full-year elective open to students in grades 9-12.

Prerequisite: *Introduction to Theatre* for students in grade 9.

This is an advanced acting class emphasizing greater depth and strength of a wide range of character types and styles. Actors will build a “toolbox” of skills that will enable them to have a more thorough understanding of the process of creating characters of diverse ages, backgrounds, temperaments, and emotions. They study the classical acting techniques of world-renowned acting coaches like Stanislavki, Hagen, and Meisner, and perform scenes from the classic plays of Euripedes, Sophocles, Shakespeare, Marlow, Moliere, and Chekhov as well as the best of the contemporary playwrights.

#### ***Advanced Directing and Playwriting***

Full-year elective open to students in grades 10-12.

Prerequisite: two years of grades 8-12 level theater courses and instructor approval.

This course explores the fundamentals of dramatic structure through analysis of contemporary and classical scripts. Students practice writing and telling stories through the use of dialogue while simultaneously learning about the nature of characterization, relationships, dramatic actions, and conflict. Play production style, interpretation, technique, and actor-director dynamics become the key elements in directing scenes on a small scale as the class becomes a forum for reading, producing, and directing original scripts.

#### ***Stagecraft***

Full-year elective open to students in grades 9-12.

Prerequisite: *Introduction to Theatre* for students in grade 9.

Stagecraft is the technical theater course that builds upon the foundations established in *Introduction to Theatre*. This class focuses on scenic and prop construction, costumes and makeup, lighting, sound, and stage management. Students learn skills and concepts while doing classroom projects and helping on production support elements.

#### ***Technical Design***

Full-year elective open to students in grades 9-12.

Prerequisite: *Stagecraft* or instructor approval.

This course considers set design and construction, stage lighting design and execution, sound enhancement in play production, properties design and construction, costume design and building, and character makeup design. Students solve practical problems and study the work of master designers and technicians in contemporary theatre. Students work to begin portfolios of documents and drawings conceptualizing their visions of design for plays and productions.

### ***Advanced Theatre Projects***

Full-year elective open to students in grades 11 and 12. Prerequisite: two years of grades 8-12 level theater courses and instructor approval.

This course allows the most advanced theatre students to pursue projects of special interest to them. Applying knowledge and skills learned in previous courses, students develop projects which focus intensely on detailed work related to technical production and design, acting and directing for stage and film, and preparing college audition material and portfolios. Working with the instructor, students design their own course of study.

### **Dance Courses**

*Foundation in Dance* is a prerequisite for all dance courses offered in grades 9-12. Students in grade 8 must enroll in *Foundation in Dance* or receive instructor approval to enroll in upper level dance courses. Students in grades 9-12 who have studied dance previously may bypass this course with instructor approval.

**NOTE: All dance courses have a \$25 costume fee per semester, which will be vouchered to the students' account.** Students on financial aid will have the course fee covered at the same rate as their financial aid award. This fee is to cover concert specific costumes. Students are still responsible for their own rehearsal dance wear, undergarments including leotards and tights, and shoes as required for the type of dance studied.

### ***Foundation in Dance***

Full-year elective open to students in grades 8-12.

What is dance? What is technique? How does one make a dance? What role does dance play in society? This introductory dance appreciation course is a multi-component dance study experience. The class explores the relationship of dance with self, culture, and environment. Studies include basic fundamentals in classical ballet, modern, and jazz. The class will also explore skills in social dance, body and spatial awareness, theory and practices, history, dance production, and dance in film and stage. The course includes critical writing, mandatory participation in the fall and spring dance concerts, and attendance at one other arts performance per semester. *See note (at the top of the Dance section)) regarding costume fee and required clothing.*

### ***World Dance II***

Full-year elective open to students in grades 9-12. Prerequisite: *Foundation in Dance* and/or instructor approval.

This course examines ethnological dance as a universal activity and expression of cultural identity. The roots of dance from Africa, the Americas, the Caribbean, Egypt, and Europe will be the focus. Through observation and performance, students will develop a greater knowledge about and appreciation for old and new trends in world dance. This course includes critical writing, mandatory participation in the fall and spring dance concerts, and attendance at one other arts performance per semester. *See note (at the top of the Dance section)) regarding costume fee and required clothing.*

### ***World Dance III***

Full-year elective open to students in grades 10-12. Prerequisite: *World Dance I* and instructor approval.

Students in this course are continuing the studies of *World Dance*. This course includes critical writing, mandatory participation in the fall and spring dance concerts, and attendance at one other arts performance per semester. *See note (at the top of the Dance section)) regarding costume fee and required clothing.*

### ***Dance Technique II***

Full-year elective open to students in grades 9-12. Prerequisite: *Foundation in Dance* and/or instructor approval.

This class provides the continuation of studies in the techniques and practices of classical ballet, modern, and jazz. The course provides for serious concentration in placement, movement phrasing, performance skills, musicality, composition, theory, vocabulary, dance history, kinesiology, and health. It is a continuation of the study of dance as an art form and its relationship to self, culture, and environment. Students will have an opportunity to train with guest teachers. This class includes critical writing, mandatory performance participation in the fall and spring dance concerts, and attendance at one other arts performance per semester. *See note (at the top of the Dance section)) regarding costume fee and required clothing.*

### ***Dance Technique III***

Full-year elective open to students in grades 9-12.  
Prerequisite: *Foundation in Dance* and/or instructor approval.

This class is an advanced level course with strong concentration on techniques and practices of classical ballet, modern, and jazz, with emphasis on building artistry and advanced performance skills of the serious dancer. It also continues studies in vocabulary, theory, history, composition and choreography, aesthetic qualities of movement and phrasing, and musicality. The class will explore dance as an art form, dance production, stage make-up for the dancer, dance in film and stage, dance physics, kinesiology, and health. Students will have the opportunity to study with guest teachers. The course includes critical writing, one oral presentation, mandatory performance participation in the fall and spring dance concerts, and attendance at one other arts performance per semester. *See note (top of this page) regarding costume fee and required clothing.*

### ***Advanced Dance Technique***

Full-year elective open to students in grades 11-12.  
Prerequisite: three years of grades 8-12 level dance courses and instructor approval.  
Not offered as Physical Education Credit Course

Students in Advanced Dance are in a second or third year of Dance Technique: Level 3. They are expected to create or generate student choreography as a showcase within the classroom or informal/formal setting. Students will do one advanced dance-topic research project and presentation, are required to participate in the fall and spring dance concerts, and must attend one other arts performance per semester. *See note (at the top of the Dance section) regarding costume fee and required clothing.*

### ***Advanced World Dance***

Full-year elective open to students in grades 11-12.  
Prerequisite: three years of grades 8-12 level dance courses and instructor approval. Not offered as Physical Education Credit Course

Students in Advanced Dance are in a second or third year of World Dance II. They are expected to create or generate student choreography as a showcase within the classroom or informal/formal setting. Students will do one advanced dance-topic research project and presentation, are required to participate in the fall and spring dance concerts, and must attend one other arts performance per semester. *See note (at the top of the Dance section) regarding costume fee and required clothing.*

## **Music Courses**

All music courses are year-long courses with out of class concerts as part of every course except *Music Theory*.

### ***Concert Band***

Full-year elective open to students in grade 8 and 9.  
Prerequisite: ability to play intermediate level band literature.

This is a class for the developing band student. Emphasis is placed on fundamentals of technique, rhythm, and ensemble playing. Students do not need to audition but are expected to have at least one year of study on their instrument. Private study is not necessary but highly encouraged. This ensemble will present at least three concerts during the year, and members have the opportunity to participate in the pep band and, possibly, regional festivals. All students are expected to maintain basic playing skills and to maintain the discipline involved in playing a musical instrument.

### ***Symphonic Band***

Full-year elective open to students in grades 10-12.  
Ninth graders may enroll with instructor approval after a successful audition.

This is an advanced-level band class. Students perform a repertoire of band music composed by traditional and contemporary composers. The ensemble presents at least five performances per year, some of which are competitions at regional festivals. Members also have opportunities to participate in the pep band, chamber ensembles, and solo performances. Instrumental doubling and private study are highly encouraged. All students are expected to maintain the discipline involved in playing a musical instrument.

### ***Advanced Symphonic Band***

Full-year elective open to students in grades 11-12.  
Prerequisite: three years of grades 8-12 level Academy Band courses and instructor approval.

In addition to meeting the requirements of the Symphonic Band course, students in Advanced Symphonic Band will be expected to take on a leadership role as defined by the Band Director. Students will be expected to play at least 2 octave of all 12 major scales. They will be expected to properly prepare and audition for all solo opportunities that arise in class; they will also be expected to properly prepare and audition for the NMMEA All-State Band, to participate fully in Pep Band activities and will play a feature piece in their senior year.

### ***Jazz Ensemble***

Full-year elective open to students in grades 9-12.  
Prerequisite: Instructor approval.

This class is designed for students who play traditional jazz instruments: saxophone, trumpet, trombone, guitar, bass, piano and/or keyboard, and auxiliary percussion. A high level of proficiency is demanded by the music played, and there is a special focus on jazz improvisation. To enroll in this class, students must have technical ability representative of at least two years of study on their instruments. Students will be further divided by audition into two skill-based groups in the beginning of the year. In addition to performance, the course will include studies in music theory, jazz literature, jazz history, and improvisation. There are approximately seven performances during the year, including regional festivals. Additional performance opportunities include pep band, combos, and solo playing. Instrumental doubling and private study are encouraged. All students are expected to maintain the discipline involved in playing a musical instrument.

### ***Advanced Jazz Ensemble***

Full-year elective open to students in grades 11-12.  
Prerequisite: three years of grades 8-12 level Academy Band and/or Jazz Ensemble courses and instructor approval.

In addition to meeting the requirements of the Jazz Ensemble course, students in Advanced Jazz Ensemble will be expected to take on a leadership role as defined by the Ensemble Director. They will be expected to properly prepare and audition for all solo opportunities that arise in class; they will also be expected to properly prepare and audition for the NMMEA All-State Jazz Band.

### ***Chorus I - Vivace***

Full-year elective open to students in grades 8-10.

Students in Chorus I study a variety of repertoire, ranging from the renaissance to the present day, at a difficulty level appropriate to the size and experience of the class. More experienced students may be offered opportunities for leadership. Section leaders will be expected to take responsibility both for their own musical development and for that of the less experienced students in their section. Healthy vocal production, choral blend, teamwork within the ensemble, and performance presentation are addressed throughout the year. Sight-reading skills are developed with regular, individual, graded practice assignments, and the students develop their knowledge of musical theory and notation through applied study.

A critical awareness of historical and aesthetic issues in choral music is also encouraged. The classes may attend local performances by top-level professional choral groups as part of their studies. Students are expected to maintain vocal health, basic singing skills, and the discipline necessary for choral artistry and will participate in at least three concerts during the year.

### ***Chorus II - Cantabile***

Full-year elective open to students in grades 10-12. Students entering grades 11 or 12 will be assigned to Chorus II. Students entering grade 10 who have taken a complete year of Chorus at Albuquerque Academy in grade 9 will be assigned to Chorus II. Other 10th graders (regardless of earlier Chorus experience) will be assigned to Chorus I. 10th grade placements may be subject to revision in the early part of the year, at the discretion of the Chorus Director and the Chair of the Performing Arts Department.

Students in Chorus II study a variety of repertoire, ranging from the renaissance to the present day, at a difficulty level appropriate to the size and experience of the class. More experienced students may be offered opportunities for leadership. Section leaders will be expected to take responsibility both for their own musical development and for that of the less experienced students in their section. Healthy vocal production, choral blend, teamwork within the ensemble, and performance presentation are addressed throughout the year. Sight-reading skills are developed with regular, individual, graded practice assignments, and the students develop their knowledge of musical theory and notation through applied study. A critical awareness of historical and aesthetic issues in choral music is also encouraged. The classes may attend local performances by top-level professional choral groups as part of their studies. Students are expected to maintain vocal health, basic singing skills, and the discipline necessary for choral artistry and will participate in at least three concerts during the year.

### ***Advanced Chorus***

Full-year elective open to students in grades 11-12.  
Prerequisite: three years of grades 8-12 level Academy Chorus courses and instructor approval.

In addition to meeting the requirements of the Chorus II course, students in Advanced Chorus will be expected to take on a leadership role as defined by the Chorus Director. They will be expected to properly prepare and audition for all solo opportunities that arise in class; they will also be expected to properly prepare and audition for the NMMEA All-State Choruses.

**Voice**

Full-year elective open to students in grades 10-12  
Prerequisite: Instructor approval.

This is a class for the advanced student singer. Singers who choose the Voice elective will study solo vocal repertoire drawn from various historical periods and styles. Students will have the opportunity to study classical art song, oratorio, musical theatre, and developmentally appropriate operatic repertoire in a variety of languages including, but not limited to, English, French, German and Italian. Students will study classical vocal technique, diction, stylistic awareness, and the rudiments of voice science, especially as it applies to vocal health. Class meetings consist of individual lessons, group lessons, supervised individual practice sessions, and masterclasses where students perform for the whole group and receive constructive feedback. Students are expected to perform as soloists and participate in at least two voice recitals during the year.

**String Consort**

Full-year elective open to students in grade 8 and 9.  
Prerequisite: ability to play intermediate level string literature.

String Consort continues studies at the intermediate level in string orchestra and chamber literature. Scales in two octaves are the standard for the class and will be studied in all keys. Bow articulations, shifting, tone quality, intonation, and ensemble accuracy are included in the class. This group performs in at least three concerts during the year. All students are expected to maintain basic playing skills and to practice the discipline involved in playing a musical instrument.

**Chamber Players**

Full-year elective open to students in grades 10-12.  
Ninth graders may enroll with instructor approval after a successful audition.  
Prerequisite: ability to play advanced level string literature.

This is an advanced string orchestra class, dealing with high-level literature and techniques. Students will study three-octave scales in all keys, as well as string orchestra and chamber literature of various levels. Students continue to refine playing skills, both as individuals and as members of an ensemble. The group performs in at least four concerts during the year. All students are expected to maintain basic playing skills and to practice the discipline involved in playing a musical instrument.

**Advanced Chamber Players**

Full-year elective open to students in grades 11-12.  
Prerequisite: three years of grades 8-12 level Academy string orchestra courses and instructor approval.

In addition to meeting the requirements of the Chamber Players course, students in Advanced Chamber Players will be expected to take on a leadership role as defined by the Orchestra Director. Students will be expected to play 3 octave scales in all keys; major, melodic and harmonic minors, to play advanced and extended repertoire in string orchestra as well as chamber music, to be performed in class and for outside of class opportunities. They will be expected to properly prepare and audition for all solo opportunities that arise in class; they will also be expected to properly prepare and audition for the NMMEA All-State Orchestra and the Solo & Ensemble Festival.

**Classical Guitar I**

Full-year elective open to students in grades 8-12.

Music reading, chording, tablature, and finger-picking will be included in the course. Students play classical, flamenco, folk, and popular styles. All students are expected to maintain basic playing skills and to practice the discipline involved in playing a musical instrument. Students will be expected to perform in at least three concerts during the year.

**Classical Guitar II**

Full-year elective open to students in grades 8-12.  
Prerequisites: *Classical Guitar I* or instructor approval.

Students will continue study in technique and reading, but will focus on playing and reading in the upper positions of the fretboard. Harmonic studies will include diatonic function, extended chords (7th, 9th, 13th and altered chords), and chord substitution. Repertoire will be selected from classical, flamenco, jazz, popular, rock, and folk idioms. Special emphasis will be placed on improvisation and composition. Students will be expected to perform in at least three concerts during the year, to practice at least three hours a week outside of class, and to provide and maintain their own guitars.

### ***Classical Guitar III***

Full-year elective open to students in grades 9-12.  
Prerequisites: *Classical Guitar I* and *II* or instructor approval.

This is a class for the advanced student guitarist. Studies in Guitar III will include music by Tarrega, Sor, Albeniz, Bach, Barrias, Sanz, and others. Students will work on jazz and blues improvisation, with an emphasis on the styles of Wes Montgomery and Joe Pass as well as classical studies. Theory concepts will include harmonic progressions using tri-tone substitution and chord extension. Rudimental counterpoint will also be introduced. Students will be expected to perform in at least three concerts during the year in the class ensemble and possibly as soloists.

### ***Classical Guitar IV***

Full-year elective open to students in grades 10-12.  
Prerequisite: Instructor approval.

This course is designed for the technically advanced guitar student who is ready to pursue the study of the more technically difficult classical guitar repertoire in an ensemble setting. A high level of proficiency is demanded by the music played, and there is a special focus on ensemble and rehearsal techniques. Students continue to refine playing skills, both as individuals and as members of an ensemble. They will examine, in depth, issues regarding repertoire, technique, and practice habits. The group will perform in at least three concerts during the year. All students are expected to maintain high level playing skills and to practice the discipline involved in playing a musical instrument. Students will be expected to perform in at least three concerts during the year in the class ensemble and possibly as soloists.

### ***Advanced Classical Guitar Ensemble I***

Full-year elective open to students in grades 11-12.  
Prerequisite: Instructor approval.

This course is designed for the technically advanced student who is ready to pursue the study of the most technically difficult classical guitar repertoire. The highest level of proficiency is demanded by the music played, and there is a special focus on ensemble and rehearsal techniques. Students continue to refine playing skills, both as individuals and as members of an ensemble. They will examine, in depth, issues regarding repertoire, technique and practice habits. The ensemble performs in at least three concerts during the year. All students are expected to maintain high level playing skills and to practice the discipline involved in playing a musical instrument.

### ***Advanced Classical Guitar Ensemble II***

Full-year elective open to students in grade 12.  
Prerequisite: Instructor approval.

This course is a second year of Advanced Guitar Ensemble II. Students meet with Advanced Guitar Ensemble II taking a leadership role as section leaders and are required to perform advanced solo material in addition to meeting the requirements of the Advanced Guitar Ensemble II course.

### ***Advanced Music Theory***

Full-year elective open to students in grades 11 and 12.

This course covers the essential elements of music theory. Students will develop their aural, written, compositional, analytical, and sight-reading skills; master the rudiments of music, including notation, intervals, scales and keys, chords, metric organization, and rhythmic patterns; and write music based on the fundamentals of diatonic harmony. Musical form and style will also be studied. While emphasis will be given to common-practice procedures, 20th century music techniques will be explored through analysis and composition.

## Physical Education

Chair: Lisa Logsdon 828-3127 logsdon@aa.edu

The physical education program is designed to encourage and foster the development and maintenance of personal physical fitness. The program promotes “joy of effort” in physical activities and provides elements of fun and enjoyment through participation in a variety of individual and team sports. Such participation develops attitudes, concepts, and values that may aid in problem solving and decision making. Instructors concentrate on physical fitness as well as mental, social, and emotional development. In all grades, mental development is achieved through the learning of behaviors, concepts, rules, and strategies of selected physical activities. Social and emotional development are acquired through physical activities that result in an awareness of appropriate behavior and actions. Students are encouraged to build good health habits early in life that will carry over into an enriched adulthood. Exemptions to the physical education requirements are granted only to students who are forbidden by their physicians to participate in any form of exercise or who are cleared by the departmental chair.

### Physical Education Requirements

*Grade 8 and 9:* All students will participate in a physical training method based on multi-planar and multi-directional gross motor skill development. Use of compound movement patterns to promote the integration of mind and muscle will serve as the basis for body-weight resistance exercise. Classes will incorporate whole-body movements that facilitate dynamic proprioception, representing movements associated with everyday activities, as well as agility, speed, and quickness. Students will participate in a three- or four-day rotation incorporating body-weight resistance, cardiovascular fitness, and some team and individual sports throughout each season of physical education. Students in the 8-9 Division may choose an Independent Study project. Individual projects need to be approved by the department chair prior to the beginning of the academic year.

*Grade 10:* Participation is required in either physical education for two semesters or interscholastic athletics for two seasons, or one of each.

*Grade 11:* Participation is required in either physical education for one semester or interscholastic athletics for one season.

*Grade 12:* Participation is required in either physical education for the fall semester or interscholastic athletics for one season.

Semester courses in physical education for students in grades 10-12 include the following non-athletic team options:

- Group Sports
- Weight Training
- Dance (several options) - *Note: Spring registration is only an option as a follow up to fall semester enrollment.*
- T'ai Chi Chih
- Yoga
- Outdoor Pursuits
- Outdoor Leadership
- Independent study project approved by department chair

### Athletic Teams

Students choosing to fulfill their PE requirements by participating in interscholastic athletics should be familiar with the following athletic policies, quoted from the Parent/Student Handbook:

*Because we believe that athletic competition and organized sports are essential parts of school life, we encourage broad student participation. And because we believe that maximum effort and good sportsmanship are more important than winning, we expect students to participate in the athletic program with the same responsibility expected of them in their studies. We also encourage support of all our teams. Interscholastic athletics for students in grades 6-8 are available on a limited basis when there is suitable competition. Most varsity teams are restricted to students in grades 10-12, except in unusual cases, particularly in individual sports, where a mature eighth- or ninth-grader may be permitted to compete. Such students, however, will rarely miss class for practices.*

The Academy will field one team per gender at each level of competition, with the exception of football and wrestling (girls may play on the boys' team), and volleyball (girls only). Rosters at each level are approximately the same size as those of varsity teams and carry as many players as can receive proper and equal attention from the coaches. All players on seventh-grade through junior varsity teams will have the opportunity to play in competition, but are not guaranteed equal playing time. Summer practices for fall teams involving players in grade 9 and above begin before school starts. Younger athletes begin practice the first day of school.

## Science and Computer Science

Chair: Kevin Fowler 828-3211 fowler@aa.edu

The mission of the Academy's science program, in addition to supporting the Academy's overall mission, is to accomplish three specific objectives:

- Instill in all students a genuine interest in and appreciation of the natural world, as well as a life-long commitment to learning about and caring for their physical environment;
- Produce graduates of the Academy who are "scientifically literate," as demonstrated both by their broad knowledge of concepts and their ability to apply scientific "habits of mind" to all aspects of their lives and problem-solving;
- Prepare all students for college entrance and for a successful college experience in science, technology, and science-based education.

### Minimum and Recommended Graduation Requirements

All students must take a required science course in grade 8 (*Earth Systems*) and grade 9 (*Physics I* and *Chemistry I*). The equivalent of at least two additional year-long laboratory courses, one each from the physical sciences and the life sciences, are required during grades 10-12 for graduation. Courses in computer science do not count towards this requirement. Any student who intends to pursue a science- or engineering-related college major should plan to enroll in at least three year-long laboratory science courses during grades 10-12.

### Advanced Placement Courses and Examinations

Advanced Placement (AP) courses and preparation for AP examinations are offered in computer science, biology, chemistry, physics, and environmental science. Only students who profess a serious interest in science, who seek to cover the volume and depth of material typically offered by college-level classes, and who plan to take AP exams should enroll in these fast-paced, highly-demanding courses. Non-AP courses at the Academy provide thorough and more-than-adequate college preparatory experience in all science courses (usually with greater depth and less breadth). To enroll in AP courses, students must obtain the recommendation of their current science teacher(s) as well as the approval of the department chair.

### Required Science Courses

#### *Grade 8: Earth Systems*

Full-year course required of all students in grade 8.

This course approaches the study of the Earth from a multi-disciplinary perspective, focusing on the interaction of geologic systems with atmospheric, hydrospheric, and biologic systems. Topics range from maps, rocks, and weather to unifying concepts such as plate tectonics, earth history, and evolution of life, always stressing the relationship between geology and biology.

#### *Grade 9: Physics I*

One-semester required laboratory science course for all students in grade 9. Fall

This course offers an algebra-based introduction to the basic models, methods, and concepts of physics. Topics include: basic measurement, unit conversions, Newton's laws, linear and projectile motion, forces, momentum, and energy. Like all physics courses, time is divided between content, problem solving, and hands-on laboratory activities. Course work challenges students to cultivate strong laboratory, observational, and analytical skills. Students will establish a solid foundation for study in more advanced physics and life science courses.

#### *Grade 9: Chemistry I*

One-semester required laboratory science course for all students in grade 9. Spring

This course seeks to cultivate strong laboratory, observational, and analytical skills by challenging students with experimental problems involving chemical phenomena. The course focuses on matter and energy, and investigates the structure of matter and the resultant energy exchanges and transformations. Topics include: the mole, chemical compounds, chemical equations, atomic theory, periodic properties, stoichiometry, acids/bases, and solutions. Students will establish a solid foundation for study in more advanced chemistry and life science courses.

## Full-Year Science Electives

### **Biology E: Ecology Emphasis**

Full-year elective open to students in grades 10-12.

Prerequisite: *Chemistry I, Physics I*

This course emphasizes an ecosystem approach to understanding the biological world. Students will learn the fundamentals of ecosystem structure and function, population dynamics, as well as species evolution, adaptation, and extinction. Through laboratory and classroom activities, students will study human pressure on the Earth's ecosystems, including topics such as climate change, habitat destruction, pollution, water resource depletion, and soil erosion. Field work will include trips to the Sandia Mountains, Rio Grande Bosque, and Sevilleta Wildlife Refuge. This course will help prepare students to take the SAT II Biology E exam, and with additional readings, the Advanced Placement Environmental Science exam.

### **Biology M: Molecular Emphasis**

Full-year elective open to students in grades 10-12.

(Also offered for credit during Think Academy Summer.)

Prerequisite: *Chemistry I, Physics I*

This course offers, through classroom interaction and laboratory exercises, an opportunity to see the relevance of biology in students' everyday lives. Using a molecular approach, this course emphasizes that life science is a process of discovery to be understood rather than a body of facts to be memorized. The course is divided into the following units of study: The Nature of Science, Cells, Introduction to Genetics: Ecological Interactions, Anatomy and Physiology, Diversity of Life on Earth, Evolution and Classification. There is a significant lab component which includes the opportunity for dissection of organisms.

### **AP Biology**

Full-year elective open to students in grades 11 and 12.

Prerequisites: Full year each of *Biology* and *Chemistry II* or by departmental permission.

This college-level survey course follows the Advanced Placement syllabus. Major areas of study are biochemistry, cytology, energy transformations, classical and molecular genetics, evolution, dynamics of organisms and populations, classification, plant and animal anatomy and physiology, and ecology. The course prepares students to take the Advanced Placement Biology examination. There is a significant laboratory component with both descriptive and experimental laboratory exercises designed to reinforce and expand the facts, principles and concepts of the lecture material.

### **Chemistry II**

Full-year elective open to students in grades 10-12.

(Also offered for credit during Think Academy Summer.)

Prerequisite: *Chemistry I*

This course begins with an extensive review of the mole concept, chemical equations, atomic theory, and periodic properties. It then covers molecular geometry, thermochemistry, state of matter, acids/bases, chemical equilibrium, reaction rates, electrochemistry, redox, nuclear chemistry, and a survey of organic chemistry. Wide use of demonstrations and laboratory exercises establishes an empirical basis for understanding chemical theory.

### **AP Chemistry**

Full-year elective open to students in grades 11 and 12.

Prerequisites: *Chemistry I* and *Chemistry II*, or departmental permission.

This course is an in-depth study of the topics introduced in Chemistry that also provides an introduction to organic chemistry. Considerable probing of energy concepts as related to equilibrium constants, oxidation potentials, electrochemistry, and other topics is the basis for the year's work. The laboratory work is primarily quantitative and designed to provide the student with a more concrete experience of the concepts presented in class. This course prepares students to take the Advanced Placement Chemistry examination.

### **Organic and Biochemistry**

Full-year elective open to students in grades 11 and 12.

Prerequisites: *Chemistry I* and *Chemistry II*, or departmental permission.

As an advanced laboratory physical science, Organic and Biochemistry covers topics in both basic organic chemistry and new developments in biochemistry and molecular biology. After introducing the structure and properties of some simple organic compounds, the course explores important chemical reactions and reaction mechanisms of more complex functional groups. It also focuses on stereochemistry, nucleophilic substitution and elimination, and synthetic methodology. The remainder of the course covers biological molecules: carbohydrates, nucleic acids, amino acids, peptides, proteins, and lipids. Students gain an understanding of the concepts through discussions, demonstrations, laboratory experiments, and presentations.

### ***AP Physics I***

Full-year elective open to students in grades 10-12.

Prerequisite: *Physics I*

Co-requisite: *Algebra II/Trigonometry* or higher.

This problems-oriented course challenges the students both to conceptualize and to resolve problems in kinematics, dynamics, optics, and electromagnetism. In the laboratory component, students manipulate relevant equipment to make careful observations of physical phenomena. The course is supplemented with a number of films and many demonstrations. In addition to providing students with a clearer understanding of the physical world around them, this course seeks to enhance their natural curiosity and strengthen their ability to reason clearly and effectively.

### ***Advanced Trigonometry-Based Physics***

Full-year elective open to students in grades 11 and 12.

Sophomores may take this course with permission from the department chair.

Prerequisites: *Physics I* and *Trigonometry/Pre-Calculus*.

This accelerated, non-calculus, algebra-trigonometry-based course prepares students to take the Advanced Placement Physics 1 and Physics 2 examinations. Topics covered include kinematics, dynamics, statics, mechanical energy, rotational mechanics, waves and oscillatory motion, thermodynamics, electricity and magnetism, optics and waves, relativity, and finally, atomic nuclear physics. This course is equivalent to a two-semester algebra-trigonometry-based college physics course.

### ***AP Physics C***

Full-year elective open to students in grades 11 and 12.

Prerequisite: *Physics I*. Co-requisite: *Calculus*

This course prepares the student to take the Advanced Placement Physics C examinations. Therefore, the emphasis of the course is problem solving; laboratory exercises and demonstrations serve to supplement this primary intent of the course. Two main areas are examined: mechanics and electromagnetism. In the mechanics section, the students' physics experience is amplified and expanded to include rotational dynamics. The electricity and magnetism section presents a complete treatment from Coulomb's and Gauss's laws to Maxwell's equations and electromagnetic waves.

### ***AP Environmental Science***

Full-year elective open to students in grades 10 and 12.

Prerequisite: *Physics I* and *Chemistry I*

The goal of this course is to provide students with the

scientific principles, concepts, and methodologies required to understand the inter-relationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions to resolving or preventing them. Students will achieve this goal by learning from both global (Gulf Oil Spill, Hurricane Katrina) and local (Sevilleta National Wildlife Refuge) perspectives. Field-based and experiential study will provide students with world class science experiences while understanding their own backyard ecology. Students will develop communication and critical thinking skills through written assignments, presentations, and various technologies. This interdisciplinary course will require students to think broadly and take a systems approach to understanding the world and his/her own place in this world.

### ***The History of the Universe***

Full-year elective open to students in grades 11 and 12.

Prerequisite: one science course at the 10-12 level and one history course at the 10-12 level.

This is a joint science and history course that explores the astonishing story of how the universe came into being and how it has evolved into the reality we know today. The course investigates the Big Bang, the formation of the earth, the development of life, the evolution of human beings, the rise of civilization, the scientific revolution, and the discovery of the mind. The examination of each of these areas is not meant to be exhaustive, but will sample readings and other media which highlight the significant developments during each era. Along the way, students will acquire an educated layman's knowledge of several key scientific theories in various disciplines including cosmology, geology, biology, chemistry, physics, paleontology, anthropology, and neurobiology, while avoiding a rigorous mathematical approach. The course seeks to enrich the investigation of this scientific timeline with a historical and philosophical perspective, through an investigation of the fundamental forces that drove the development of civilization, and humanity's never-ending quest to explore and make sense of the world around it.

The course is set up as a seminar. There will be a few lectures to introduce the key ideas for each unit, followed by selected readings and discussion to further develop the framework. Students will pursue small research projects to flesh out their exploration and present what they have learned to the entire class. The course is best suited for students who are comfortable pursuing their own learning through reading, discussion, synthesis, and presentation.

## Semester Science Electives

### ***Astronomy***

One-semester elective open to students in grades 10-12.

Prerequisite: None. Fall

Astronomy is the scientific study of the universe as a whole, and of celestial bodies and the underlying physics governing these bodies. We trace the origins of this exciting field from the contributions of Plato and Copernicus through those of Isaac Newton and Albert Einstein to Stephen Hawking and beyond. Areas covered include: planets, stars, and galaxies; observation astronomy and the instruments and techniques used; gravity, light, and space curvature; space exploration, and the possibility of extraterrestrial life. Current theories concerning topics such as the role of dark matter and dark energy, loop quantum cosmology, and the holographic principle are explored. The efforts of the pioneers and the paths they followed to their contributions are discussed. Videos on various topics will be shown to augment other material. The course includes planetarium software explorations and exercises, telescope labs, use of the StarLab portable planetarium, an introduction to the control and purpose of the Sandia National Labs cameras on the Science Center roof, and field trips to the Very Large Array (near Magdalena), the observatory at New Mexico Tech (Socorro), and the Planetarium (Albuquerque).

### ***Anatomy and Physiology I***

One-semester elective open to students in grades 11 and 12.

Prerequisites: *Chemistry I*, *Physics I*, and *Biology*. Fall

This advanced-level life science course provides an integrated study of human structure and function. It covers cells and tissues, as well as the integumentary, skeletal, muscular, nervous, cardiovascular, respiratory, digestive, urinary, reproductive, and endocrine systems. The laboratory component stresses demonstrations of physiological principles, often in the context of exercise physiology. Students wishing to continue may enroll for spring semester.

### ***Anatomy and Physiology II***

One-semester elective open to students in grades 11 and 12.

Prerequisites: *Chemistry I*, *Physics I*, *Biology*, *Anatomy and Physiology I* or departmental permission. Spring

This advanced-level life science course is a continuation of *Anatomy and Physiology I*.

### ***Electronics***

One-semester elective open to students in grades 10-12.

Prerequisite: None. A programming language course is recommended. Spring

This elective covers most of the topics typically addressed in an introductory college-level electronics course. Both analog and digital electronics are discussed with an emphasis on the latter. Subject areas include the basics of voltage and current, transistors, capacitors, integrated circuits, circuit analysis, feedback, signals and processing, sensors, and microprocessors. The efforts of the pioneers and the paths they followed to their contributions are discussed. Students will analyze circuits and other design features using computer software and then construct components in the lab. Laboratory exercises will focus on applications in the areas of computers and mobile robotics. Videos on various topics will be shown to augment other material. Field trips to observe representative activities are planned.

### ***Intro to Forensic Science***

One-semester elective open to students in grades 11 and 12.

Prerequisites: *Chemistry I*, *Physics I*, and *Biology* or *Chemistry II*. Spring

This class introduces the student to those areas of biology, chemistry, and physics relating to the analysis of physical evidence at a crime scene. The use of the scientific method in forensic investigation will be stressed. Students will also understand the importance of biotechnological techniques and DNA sampling and their application in criminal investigations. Students will also explore forensic web sites on the Internet and will analyze several case studies. A significant laboratory component is included.

## Computer Science Electives

### *NetLogo*

One-semester elective open to students in grades 9-12.  
Prerequisite: None.  
Offered: Spring.

NetLogo is a programmable, graphical modeling environment for simulating natural and social phenomena. The agent-based approach used is ideal for modeling complex systems as they develop over time. Instructions are given to “agents” that operate independently. This makes it possible to explore the connection between the micro-level behavior of individuals and the macro-level patterns emerging from their interaction. For many problems this approach is considered superior to equation-based methods used by other languages. NetLogo provides a large Models library of pre-written graphical simulations that will be used and modified. Simulations can be developed to address areas in fields such as biology, medicine, physics, chemistry, mathematics, computer science, economics, and social psychology. The results of simulations run in NetLogo are presented graphically, which makes it much easier to analyze and understand the phenomena being studied.

A free copy of the software can be downloaded for use at home. Since it runs on the Java virtual machine, it is compatible with all major operating systems. Students will work with and modify the built-in models and learn how to program original models in fields selected from those listed above.

### *Python I*

First semester of a two-semester elective open to students in grades 9-12.  
Prerequisite: None.  
Offered: Fall

Python is a powerful yet easy-to-use interpreted programming language. Many consider it to be one of the most widely-used languages, along with Java, and C++. Python contains the strengths of compiled languages such as C++ and Java including the use of objects, sophisticated data structures, and organization. With all of its strengths, it is also considered relatively easy to learn. This free open-source software can be downloaded from the web. Sample code and other course related material is on the instructor’s web site.

First semester topics include history and design objectives of the language, variables and data types, expressions, and statements, control structures, functions, lists, tuples, dictionaries, and the Common Gateway Interface.

### *Python II*

Second semester of a two-semester elective open to students in grades 9-12.  
Prerequisite: Successful completion of Python 1.  
Offered: Spring

Second semester topics include object-oriented programming, classes, inheritance, graphical user interface components, exception handling, string manipulations, and regular expressions.

### *AP Computer Science A*

Yearlong AP elective open to students in grades 10-12.  
Prerequisite: None.

Because of Java’s proven strengths, the College Board chose it to be the AP language beginning in 2003. Some of the reasons why it is the favorite language of many professional programmers include its use of threads which make writing software for networks easier; the use of exception handling and garbage collection which enable more robust design, its numerous security features which catch many programming mistakes, and its exceptional graphical user interface (GUI) capabilities.

First semester topics include: the fundamentals of the language such as data types, object-oriented programming concepts, control structures, arrays, arraylists, strings, methods, and sorting algorithms. The Eclipse Integrated Development Environment software will be used both semesters; students can download a free copy for use at home.

Second semester topics include additional methods for storing and rapid retrieval of data, inheritance, recursion, exception handling, comparison of algorithms, applets, file and event handling, and Java graphics classes. Activities will be included to illustrate some of the many applications of the language. Students will build a simple robot and use LeJOS, the Lego Java Operating System, along with Java code to control the actions of the robot.

### ***AP Computer Science Principles***

Yearlong AP elective open to students in grades 10-12.

Prerequisite: None.

This two-semester course introduces students to the foundational concepts of computer science. It provides them with a solid foundation in computing principles so that they are adequately prepared with both the knowledge and skills to successfully participate in our increasingly digital society. No prior knowledge of computing is required. The course is complementary to AP Computer Science A using Java and the courses can be taken in any order.

First semester topics include: An introduction to computer science; introduction to programming languages with a focus on Java (covers only a small subset of Java that is necessary for this course); algorithm discovery, design, and analysis; computer building blocks of binary numbers, Boolean logic, and gates; computer systems organization; system software and virtual machines; computer networks, cloud computing, and the history and organization of the Internet. Students will be introduced to web-development software and use it to build web pages.

Second semester topics include: Information security; introduction to high-level language programming (C++, Java, JavaScript, Python, and Visual Basic); special purpose languages such as SQL and HTML; compilers and language translation; models of computation; simulation and modeling; electronic commerce and personal privacy; and artificial intelligence. Students will also be introduced to robotics and build a robot using Lego. They will then program the robot to perform designated tasks using Java.

### ***C++ I***

First semester of a two-semester elective open to students in grades 9-12.

Prerequisite: None.

Offered: Fall

C++ is one of the most powerful languages available. Because of its recognized strengths, it is used by national laboratories and corporations worldwide.

First semester topics include fundamentals of the language such as data types, control structures, one and two-dimensional arrays, strings, functions, and structs. These are topics that are typically covered in a first semester college-level course in the language. Students can download a free copy of the Microsoft compiler for use at home.

### ***C++ II***

Second semester of a two-semester elective open to students in grades 9-12.

Prerequisite: Successful completion of C++ 1.

Offered: Spring

Second semester topics include classes, sorting and searching algorithms, file handling, inheritance, and abstract data structures. An introduction to OpenGL will also be covered. This open-source software is used extensively for graphics and game development applications.

## Visual Arts

Chair: Tim Mullane 828-3376 mullane@aa.edu

The visual arts program is designed to develop students' visual perception, aesthetic awareness, critical judgment, and historical perspective while teaching the skills and techniques of the practice of art. Through a sequential, developmental curriculum, students learn to analyze works of art while acquiring the skills of fine craftsmanship and exploring their own personal visions. Students should emerge with confidence in their own skills of self-expression as well as an informed appreciation of the expressions of others.

### Prerequisites and Exceptions

*Foundation in Art* is a prerequisite for all art courses in grades 9 through 12 with the exception of *Video Art* and *AP Art History*. Seniors may enroll in level one studio courses without having taken *Foundation in Art*, and juniors may request a waiver of the requirement from the department chair by submitting a portfolio or by demonstrating other experience.

#### ***Foundation in Art***

Full-year elective open to students in grades 8-12.

This course introduces students to visual issues including composition, color, texture, volume, value, and perspective. It is designed to teach the basic skills necessary for advanced art courses while providing an intellectual challenge even for those well-acquainted with art media. In each unit of study, assignments are designed to increase technical skills and theoretical understanding while developing creativity, critical thinking, and problem-solving techniques. Students will work in a variety of drawing and painting media as well as 3-D techniques. This course is a prerequisite for all other studio art courses except *Video Art*.

#### ***Drawing and Painting I***

Full-year elective open to students in grades 9-12.

Prerequisite: *Foundation in Art*

This course allows students to explore drawing, painting, and printmaking. Assignments are geared to help students to develop their technical skills while increasing their understanding of the principles of design. Areas of study include still life, landscape, the human figure, expressive color, and composition.

#### ***Drawing and Painting II***

Full-year elective open to students in grades 10-12.

Prerequisite: *Drawing and Painting I*

This course affords students an opportunity to enhance their skills in drawing, painting, design, and printmaking through increasingly complex assignments and an expanded array of techniques. Independent work, class critiques, slide presentations, and discussions are integral to the course.

#### ***Advanced Drawing and Painting III***

Full-year elective open to students in grades 11 and 12.

Prerequisite: *Drawing and Painting II*

This course extends both the technical skills and the range of expression explored in *Drawing and Painting II*. Many projects are addressed in the context of art historical traditions and contemporary art issues. Students are taught advanced painting techniques and also have the opportunity to pursue individualized projects. Studio visits, museum tours, and wilderness art trips are an important part of the curriculum.

#### ***Sculpture I***

Full-year elective open to students in grades 9-12.

Prerequisite: *Foundation in Art*

Art work is created from a wide variety of materials in sculpture. Students in this class will learn to carve plaster, build in wood, cast metal, and make molds, as well as the safe use of required tools. In addition to developing technical skills, this course provides an art historical foundation for object making, past and present.

#### ***Sculpture II***

Full-year elective open to students in grades 10-12.

Prerequisite: *Sculpture I*

Students in *Sculpture II* will increase their range and quality of work with more ambitious projects and techniques, large scale sculptures, artist studio visits, and student-generated assignments.

**Advanced Sculpture III**

Full-year elective open to students in grades 11 and 12.

Prerequisite: *Sculpture II*

This course expands the technical skills and range of expression explored in Sculpture II. Welding, mixed media, site works, and large scale constructions will be explored. The study of the techniques and ideas of historical and contemporary sculptors will be a part of this class. Studio visits, museum tours, and wilderness art trips are an important part of the curriculum of the advanced visual arts classes. Participation in class trips is required for students enrolling in advanced level courses.

**Photo-Digital Design I**

Full-year elective open to students in grades 9-12.

Prerequisite: *Foundation in Art*

This course is about creating art with digital cameras, scanners, Adobe Photoshop, and Illustrator on Macintosh computers, as well as using analog darkroom techniques and traditional art materials to make work. Each process may be practiced separately or combined to realize a final expressive piece. Assignments stress the value of design and aesthetic choices as they relate to content and meaning. Projects reference examples from both the history of photography and design. Access to a digital camera with manual exposure is helpful, but not required, for this class.

**Photo-Digital Design II**

Full-year elective open to students in grades 10-12.

Prerequisite: *Photo-Digital Design I*

Students expand their analog and digital art-making methods in this class. Advanced digital techniques with Photoshop, Illustrator, and InDesign are used. Projects may include using toy cameras, working with studio lighting equipment, creating your own typeface, or printmaking on the press, for example. A museum field trip is usually planned.

**Advanced Photo-Digital Design III**

Full-year elective open to students in grades 11-12.

Prerequisite: *Photo-Digital Design II, Photo II, or Digital Art II*

This advanced class incorporates diverse processes from photography and digital art to prepare students for *AP Studio Art: 2-D Design*. A primary goal will be to build compelling work for the student's portfolio. Assignments are thematic in nature, utilizing a conceptual or a series-based approach. Composition, design, and color are emphasized. Students also enjoy a studio visit, museum trip, or presentation by a guest artist when applicable.

**Printmaking**

Full-year elective open to students in grades 10-12.

Prerequisite: Any Level I visual arts course (i.e., *Ceramics I, Drawing and Painting I, Sculpture I*, etc.)

This course will expose students to a variety of processes including relief, monotype, intaglio, and screen printing, where students explore aesthetic and technical connections between image content and the printing method. Projects may include linoleum block prints, screen printing on fabric, or photogravure. Students learn to create editions of prints from single and multiple plates. Students will use painterly, photographic, or digital techniques to build a complex and expressive portfolio of prints. The history of printmaking and an introduction to printmaking traditions will also be covered.

**Ceramics I**

Full-year elective open to students in grades 9-12.

Prerequisite: *Foundation in Art*

In this course, students develop several important skills of working in clay. They include hand-building (coil, pinch, and slab) and throwing on the potter's wheel. Surface treatments will include creating glazes and slips, carving designs (sgraffito), and painting on three-dimensional objects. Contemporary and Pueblo traditions will be explored.

**Ceramics II**

Full-year elective open to students in grades 10-12.

Prerequisite: *Ceramics I*

This course offers experienced ceramics students the opportunity to expand their range of skills and knowledge of clay as a medium of expression. The class is designed for students who wish to study ceramics in depth and who want to take on the technical challenge of exploring the full range of possibilities of this versatile material. Addressing both traditional and contemporary approaches to clay, the class will investigate pit firing, raku, glaze chemistry, and the design of clay bodies. Students will have the opportunity to develop a body of work based on an individual theme or interest.

### ***Advanced Ceramics III***

Full-year elective open to students in grades 11 and 12.  
Prerequisite: *Ceramics II*

This class expands the technical skills and processes explored in *Ceramics II*. Students will design their own glazes, experiment with creating their own clay bodies, and learn how to load and fire the kilns. The projects will address a variety of ceramic techniques as well as ceramic history and will be tailored to the particular interests of the students. Each student will develop a portfolio of work over the course of the year.

### ***AP Studio Art: Drawing***

Full-year elective open to students in grades 11 and 12.  
Prerequisite: *Drawing and Painting II* and permission of the instructor.

This course is intended for highly motivated students interested in the serious study of art. Satisfying the requirements of the Advanced Placement art portfolio requires a significant amount of work to be completed outside of class. In addition to developing work in a wide range of drawing and painting approaches, students are introduced to oil painting techniques, and they design and complete a substantial independent project. Students have the option of preparing digital portfolios for college admission as well as for Advanced Placement. Studio visits, museum tours, and wilderness trips are an important part of the curriculum of the advanced visual arts classes. Participation in class trips is required for students enrolling in advanced level courses. This course is designed primarily for students in grade 12. Occasionally, art school bound students may be admitted in grade 11, based on portfolio review. All students must schedule a portfolio review with the instructor before enrolling in this course.

### ***AP Studio Art: 3-D Design***

Full-year elective open to students in grades 11 and 12.  
Prerequisite: Two courses in sculpture and/or ceramics and permission of the instructor.

This course is offered for highly motivated students of art interested in building a portfolio of three-dimensional work for college admission and Advanced Placement. Students are expected to devote a substantial amount of time outside of class toward their work. The emphasis will be on creating a large number of works in an array of materials as well as investigating one material in depth. Students are expected to develop their own themes and issues to explore in their work. The portfolios can include explorations of traditional ceramic and sculptural forms as well as more unconventional contemporary ideas and materials. Students have the option of preparing digital portfolios for college admission as well as for Advanced Placement. Studio visits, museum tours, and wilderness trips are an important part of the curriculum of the advanced visual arts classes. Participation in class trips is required for students enrolling in advanced level courses. This course is designed primarily for students in grade 12. Occasionally, art school bound students may be admitted in grade 11, based on portfolio review. All students must schedule a portfolio review with the instructor before enrolling in this course.

### ***AP Studio Art: 2-D Design***

Full-year elective open to students in grades 11 and 12.  
Prerequisite: Two courses in Photography and/or Digital Art, and permission of the instructor.

This course is offered for highly motivated students interested in building a portfolio of photography or design work for college admission and Advanced Placement. Students are required to spend a substantial amount of time outside of class working on their projects. The emphasis of the first semester will be on creating a large number of pieces, which explore a wide variety of approaches and techniques. The second semester will be devoted to students creating a series of works based on a central idea of the student's choosing. Students have the option of preparing digital portfolios for college admission as well as for Advanced Placement. Studio visits, museum tours, and wilderness trips are an important part of the curriculum of the advanced visual arts classes. Participation in class trips is required for students enrolling in advanced level courses. This course is designed primarily for students in grade 12. Occasionally, art school bound students may be admitted in grade 11, based on portfolio review. All students must schedule a portfolio review with the instructor before enrolling in this course.

***AP Art History***

Full-year elective open to students in grades 10-12. Sophomores must have the permission of the instructor.

This course is a survey of art history from the pyramids to the present. Works of painting, sculpture, and architecture will be examined as reflections of their cultural contexts and as indicators of the ideas and themes of their times. Considerable emphasis will be placed upon careful visual analysis of form and content in order to reveal connections between art and politics, religion, technology, economics, and social issues. Slide lectures will be the primary vehicle for discussion, and museum trips will add a real-life dimension to viewing and analyzing art. The course will focus largely on Western art but will also address selected topics in the art of Asia, Africa, and the Americas. Areas of emphasis will include art and politics in the classical world, faith and humanism in the Renaissance, and pluralism, conflict, and abstraction in the 20th century. Topics such as race, politics, and gender will figure prominently in class discussions. This course prepares students to take the Advanced Placement examination in art history and is open to students in grades 10 through 12, (tenth graders must have the permission of the instructor). There is no prerequisite course but either a keen interest in history OR experience in the visual arts would be helpful. The course is offered by both the visual arts and the history departments; it may fulfill either an art credit or history elective credit at the student's option. Studio visits and museum tours are an important part of the curriculum of the advanced visual arts classes. Participation in class trips is required for students enrolling in advanced level courses.

**Semester Electives*****Video Art I***

One semester elective open to students in grades 10-12. Fall

In this class students will explore artistic concepts and processes through digital video. The focus of the course is to begin to understand video as an art form in terms of art historical perspective and personal practice, including critical and theoretical understanding of video. Students will learn basic production and editing skills and work both individually and collaboratively. Class time will be devoted to video production, screenings, group critiques, and discussions of readings related to the field.

***Video Art II***

One semester elective open to students in grades 10-12. Prerequisite: *Video Art I*. Spring

Building on skills developed in Video Art I, the course allows students to further explore the medium of video. Projects may include documentary, experimental, installation, and process-based works. Students will share their work through local screenings and possible gallery presentations.

## World Languages

Chair: Rolando R. Villegas 858-8847 villegas@aa.edu

The Academy's primary goal for its language students is that they learn to communicate effectively in a second language. All students in grades 6 and 7 study Spanish in a program that includes not only the language but also our unique Southwestern culture. In grade 8, students may continue with Spanish, begin with German or French, or sign up for the four-year world language sequence beginning that year (Arabic, Chinese, Japanese, or American Sign Language). The goal of communicative competency is reflected by the three- and four-year sequences (or its equivalent) required for graduation. When a student's language proficiency is uncertain, an exam is administered to ascertain the appropriate level of study. We believe that acquiring a second language involves an awareness of, and sensitivity to, the peoples who speak that language, and we encourage opportunities for exchange, vacation, and school-year visits to other countries.

In all language classes at all levels, the focus is on using the language in authentic and meaningful situations and incorporating the basic skills of listening, speaking, reading, and writing into the larger goal of communication. The courses progress in difficulty, with topical contexts, from the expression of simple needs and desires to the discussion of complex issues in the upper levels. Starting in the first year, students compose original dialogues and group skits, and present creative projects on personal or researched themes. Teachers use the target language extensively. A typical class may include several pedagogies such as cooperative learning, group projects, student-teacher exchange, some writing, and homework correction; teachers use a variety of taped and video material at all levels; and students often film or tape their own presentations based on materials they have studied. Students practice oral activities and simulate authentic language situations in a state-of-the-art language laboratory.

Progression to each higher level involves refinement of, and building upon, previously acquired skills. By the end of the second year, all basic structures have been introduced. The third through fifth years involve fine-tuning and application: essay writing becomes more sustained and complex, oral presentations are lengthier and more sophisticated, and cultural and historical aspects of the language are applied to creative projects. Students may prepare for the Advanced Placement Examinations in language (French, Spanish, Chinese, Japanese, and German) and literature (French and Spanish). Courses are offered in both levels each year as enrollment warrants. Latin is offered as an elective course for students in grades 10, 11, and 12.

## Courses

### ***American Sign Language I***

Full-year course open only to students in grade 8 and sometimes in grade 9 with permission of department chair; fulfills the first year of a four year commitment.

This course introduces the fundamental elements of American Sign Language within a cultural context. The course, which includes finger spelling and numbers, helps students develop conversational ability, culturally appropriate behaviors, and ASL grammar.

*(Note: Many, but not all, universities and colleges accept ASL as a foreign language. [Click here to see the most current list maintained by the University of New Mexico.](#))*

### ***American Sign Language II***

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the second year of a four year commitment.

Prerequisite: successful completion of *ASL I* or permission from the department chair.

This course builds on the fundamental elements of American Sign Language covered in the first year course. The course is designed to further develop proficiency through a review and expansion of vocabulary and grammar and with continued practice.

### ***American Sign Language III***

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the second year of a four year commitment.

Prerequisite: successful completion of *ASL II* or permission from the department chair.

The course is designed to further develop proficiency through a review and expansion of vocabulary, grammar, and practice. Emphasis is placed on deaf culture, its values, norms, history, literature, and folklore. Students in this course will participate in a community-based service learning project.

### ***Advanced American Sign Language IV***

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the second year of a four year commitment.

Prerequisite: successful completion of *ASL III* or permission from the department chair.

The course builds on skills developed in *ASL III* and focuses on the further development proficiency through

a review and expansion of vocabulary, grammar, and practice. Continued emphasis is placed on deaf culture, its values, norms, history, literature, and folklore. Students in this course will participate in a community-based service learning project.

### **Arabic I**

Not offered 2017-18

Full-year course open only to students in grade 8 and sometimes in grade 9 with permission of department chair; fulfills the first year of a four year commitment.

This course is an introduction to Arabic. The course will emphasize basic writing skills, pronunciation, fundamental sentence patterns, conversation, and the development of the necessary skills for reading simple texts. Students will be exposed to Arabic culture.

### **Arabic II**

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the second year of a four year commitment. Prerequisite: successful completion of *Arabic I* or permission from the department chair.

Arabic II builds up knowledge of Arabic vocabulary, idioms, and structures. The course will also develop students' Arabic language skills with an emphasis on reading and listening comprehension, grammar, and writing. The course will focus on the expansion of conversation skills through activities involving "real-life" experiences. In addition, Arabic II will expand students knowledge and understanding of Arabic culture, including food, family life, geography, history, literature, and religion.

### **Arabic III**

Full-year course open to students in grades 9-12; fulfills the third year of a four year commitment. Prerequisite: successful completion of *Arabic I* and *II* or permission from the department chair.

This full-year course is for students who have been exposed to written or spoken Arabic in *Arabic I* and *Arabic II*. *Arabic III* builds knowledge of vocabulary, idioms, and structures. The course will also develop students' Arabic language skills with an emphasis on the study of grammatical concepts, reading and listening comprehension, writing, and conversational activities to increase fluency. The course will focus on the expansion of Arabic language skills through activities involving "real-life" experiences. In addition, Arabic III will expand students knowledge and understanding of Arabic culture, including food, family life, geography, history, literature, and religion.

### **Advanced Arabic IV**

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the fourth year of a four-year commitment. Prerequisite: successful completion of *Arabic I* through *III*, or permission from the department chair.

*Arabic IV* develops further knowledge of Arabic vocabulary, idioms, and structures. The course provides additional practice to help students attain a higher level of skill development and linguistic accuracy, and conversational activities to increase fluency. The course will focus on the expansion of Arabic language skills through activities involving "real-life" experiences. In addition, *Arabic IV* will expand student knowledge and understanding of Arabic culture, including food, family life, geography, history, literature, and religion. Authentic reading materials (newspapers, magazines, movies, music) will be used to further develop reading and listening skills. Selection of materials used is based on the complexity of the tasks and student interest.

### **Advanced Arabic V**

Not offered 2017-18

Full-year course open to students in grades 9-12. Prerequisite: successful completion of *Arabic I* through *IV*, or permission from the department chair.

This course builds on knowledge from previous courses in Arabic, and is designed to further develop proficiency and communication of modern standard Arabic in four basic skills: listening, speaking, reading, and writing. The main objectives of this course are to enhance one's ability to understand spoken Arabic, to converse on a variety of topics (e.g. the press, literature, social aspects, education, etc.), and to narrate, discuss, and read authentic material in Arabic. More attention will be paid to discussing and conversing in Arabic. Mass media in the Middle East is an integral part of this course. Students will have some exposure to materials in Arabic dialects. Reading will be supplemented with extra material as needed. *Arabic V* will also expand understanding of Arabic culture by exploring food, family life, geography, history, literature, and religion.

### ***Chinese I***

Not offered 2017-18

Full-year course open only to students in grade 8 and sometimes in grade 9 with permission of department chair; fulfills the first year of a four year commitment.

This course introduces students to Mandarin Chinese, the official modern language of China. Emphasis will be on the spoken language, with a goal to 1) gain basic conversational fluency in everyday life topics; 2) learn the common components, radicals, and the correct stroke order of Chinese characters; and 3) explore many aspects of Chinese culture, including food, music, calligraphy, Chinese festivals, and popular culture in the PRC, Taiwan, and Hong Kong. In addition to the textbook, audio and videotapes, Chinese films, newspapers, movie clips, and many authentic materials will be frequently used in class.

### ***Chinese II***

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the second year of a four year commitment. Prerequisite: successful completion of *Chinese I* or permission from the department chair.

This course builds upon the material introduced in Chinese I, with an emphasis on basic writing skills, pronunciation, fundamental sentence patterns, conversation, and the development of the necessary skills for reading simple texts. Students will also be exposed to Chinese culture.

### ***Chinese III***

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the third year of a four year commitment. Prerequisite: successful completion of *Chinese I* and *II*, or permission from the department chair.

In the third year of Chinese, we will emphasize a balance of spoken and written Chinese. Goals for the year will be: 1) to continue to develop conversational fluency; 2) to read short stories and newspaper articles; and 3) to understand Chinese proverbs. In addition, students will learn how to compose skits, essays and short stories. Students will also continue to learn 300–400 more new Chinese characters in addition to the 600 Chinese characters that they already learned in the past two years. Finally, students will continue to explore Chinese culture and modern life in the PRC, Taiwan, Taiwan, and Hong Kong.

### ***Advanced Chinese IV***

Full-year course open to students in grades 9-12; fulfills the fourth year of a four-year commitment. Prerequisite: successful completion of *Chinese I* through *III*, or permission from the department chair.

A continuation of *Chinese III*, this fourth year of Chinese will emphasize a balance of spoken and written Chinese. Students continue to develop conversational fluency with reading stories, newspapers, and interpreting Chinese proverbs. An additional 300–400 hundred new Chinese characters will be introduced to study with the 900 already learned from previous courses. Finally, the class will continue to explore Chinese culture and modern life in the PRC, Taiwan, and Hong Kong.

### ***AP Chinese Language and Culture***

Not offered 2017-18

Full-year course open to students in grades 9-12. Prerequisite: successful completion of *Chinese I* through *IV*, or permission from the department chair.

This class prepares students to demonstrate their level of Chinese proficiency across three communicative modes (interpersonal, interpretive, and presentational), and the five goal areas (communication, cultures, connections, comparisons, and communities). A New China, an intermediate reader of modern Chinese by Princeton University Press, and supplemental material such as newspaper articles, advertisement, movies, poems, classical and modern Chinese short stories, will be used to prepare students for the AP Chinese exam in the spring. (Taking the AP Chinese exam is optional.)

### ***French I***

Full-year course open to students in grades 8-12; fulfills the first year of the graduation requirement.

This course introduces students to French within conversational contexts. Knowledge of the French-speaking areas within the United States and around the world opens the door to other cultures. Students will be able to describe themselves to others, express preferences and needs, and ask important questions. They understand French from the instructor and other sources such as videos, tapes and guest speakers. The class progresses rapidly toward functioning in French. Students collaborate on activities in drama, art, cooking, and simple research. Vocabulary, writing, and original conversation skills increase through reading, practice, and current aural/oral techniques.

**French II**

Full-year course open to students in grades 9-12; fulfills the second year of the graduation requirement. Prerequisite: successful completion of *French I* or permission from the department chair.

The instructor models the active use of French in the classroom and expects students to function in French. Extended conversation about personal subjects increases, as does the ability to read with comprehension. Students research francophone areas of the world and Paris, thus delving more deeply into other cultures. Feature films lead to extended writing, personal projects such as family histories, autobiography, and poetry, and group activities in drama become more important. Students learn to converse in and about the past and future as they enlarge their vocabulary.

**French III**

Full-year course open to students in grades 10-12; fulfills the third year of the graduation requirement. Prerequisite: successful completion of *French II* or permission from the department chair.

This course, conducted almost entirely in French, continues to emphasize the active use of French for communication both orally and in writing, and stresses use of more complex structure. Students read and perform from major authors such as La Fontaine, Daudet, and Pagnol. There are creative projects in art, drama, and writing. Compositions are more developed in content and length, skills which support major sustained research, in French, on the French province of the student's choice. Feature films and discussions of readings from a variety of sources provide the opportunity for regular oral practice, improvisation, and written reactions.

**Advanced French IV**

Full-year elective open to students in grades 11 and 12. Prerequisite: successful completion of *French III* or permission from the department chair.

This course emphasizes oral proficiency and the ability to communicate effectively in French, both in and out of the classroom, through use of formal and informal spoken language. A thorough review of the grammar and the acquisition of a broader vocabulary continue throughout the year. Essays which discuss contemporary and philosophical issues are a regular part of the course. Students read from the classic authors such as Hugo, La Fontaine, and de Maupassant along with contemporary authors such as St. Exupery. They study French history through authentic documents, films, art and architecture, and French music. The cultural units involve creative projects and research; these allow a student to pursue a special interest in French. Students begin to prepare for the Advanced Placement examination in the French language, which they may take the following year.

**AP French Language and Culture**

Full-year elective open to students in grades 11 and 12. Prerequisite: successful completion of *French IV* or permission from the department chair.

This course prepares students to sit for the French Language and Culture Advanced Placement examination. Class includes informal and formal evaluated speaking assignments and rigorous writing practice. The course is built around six cultural themes: global challenges; families and communities; personal and public identities; beauty and aesthetics; science and technology; and contemporary life. Students will continue to explore the cultures of many Francophone countries and establish comparisons between their national, regional, or family cultures and the ones of Francophone communities far away. On a daily basis, students will learn to express their own point of view and participate in interpersonal, interpretive, and presentational communication activities.

### ***German I***

Full-year course open to students in grades 8-12; fulfills the first year of the graduation requirement.

This course introduces students to German through both listening and speaking. Students begin by learning frequently used expressions in simple conversational form, by imitating the instructor and speakers on tape. Systematic expansion of vocabulary and explanation of grammar complement aural-oral learning. Writing begins with short dictations and progresses to reports based on suggested situations. Later in the first semester, a reader supplements the text.

### ***German II***

Full-year course open to students in grades 9-12; fulfills the second year of the graduation requirement. Prerequisite: successful completion of *German I* or permission from the department chair.

Lessons in second-year German are again introduced by conversations, but at a more advanced level of difficulty. Oral questions must be answered in German, and each lesson includes extensive drills in grammar and prose narratives. Writing continues with compositions done entirely in German. Reading beyond the text includes use of a reader.

### ***German III***

Full-year course open to students in grades 10-12; fulfills the third year of the graduation requirement. Prerequisite: successful completion of *German II* or permission from the department chair.

In the third year of German, students read, discuss, and write about advanced material covering the geographical, social, political, and historical aspects of Germany and the German people. Students present both oral and written reports. The literature is represented by a text of short stories by some of Germany's best-known authors from various eras.

### ***Advanced German IV***

Full-year elective open to students in grades 11 and 12. Prerequisite: successful completion of German III or permission from the department chair. Note: German IV may be combined with AP German Language due to enrollment considerations. However, many of the course activities and requirements will vary from those of *AP German Language*.

All of the skills that have been learned in the three previous years are put to use and perfected in this course. The class is conducted in German. Texts used in the class include a major play and several short stories by some of Germany's most prominent post-war authors. Access to and use of the worldwide web for research, news articles and special interest stories is an integral part of this course.

### ***AP German Language and Culture***

Full-year elective open to students in grade 12. Prerequisite: successful completion of German IV or permission from the department chair. Note: AP German Language may be combined with German IV due to enrollment considerations. However, many of the course activities and requirements will vary from those of *German IV*.

This course emphasizes fine tuning advanced reading, writing, and listening/speaking skills, and stresses more complex grammar, vocabulary, and idiomatic structures. AP German Language also delves more deeply into the cultural climate of contemporary Germany and the emerging European Community. The exact syllabus depends on the needs and preferences of the students; one year the class may read plays and short stories, while another, it might work more with novels and poetry. A major component of AP German Language is preparation for the AP exam given in May; however, taking the AP exam is not a requirement of the course. Students who choose to do so may elect to use the content and structure of the course to better prepare themselves for this event in the spring and will be given careful instruction and guidance.

### ***Japanese I***

Not offered 2017-18

Full-year course open only to students in grade 8 and sometimes in grade 9 with permission of department chair; fulfills the first year of a four year commitment.

This course is an introduction to Japanese. The course will emphasize basic writing skills, pronunciation, fundamental sentence patterns, conversation and the development of the necessary skills for reading simple texts. Students will be exposed to Japanese culture.

**Japanese II**

Full-year course open to students in grades 9-12; fulfills the second year of a four year commitment. Prerequisite: successful completion of *Japanese I* or permission from the department chair.

In this class students will be introduced to the basic structures of the Japanese language. They will receive a solid foundation in Japanese conversation, writing, and culture throughout the semester, with the goal of enabling them to understand everyday Japanese life. The focus will be on language that is acceptable to all Japanese individuals. By the end of this class students should be able to properly pronounce and hear any Japanese words and English words used in Japanese sentences; properly structure sentences in present and past tenses; write and read both Hiragana and Katakana, and basic Kanji; and know about Japanese society and geography, especially as they relate to Japanese language.

**Japanese III**

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the third year of a four-year commitment. Prerequisite: successful completion of *Japanese I* and *II*, or permission from the department chair.

This course continues the emphasis on understanding reading, writing, speaking, and listening comprehension skills at a more advanced level of grammar difficulty. Students will practice a solid foundation of Japanese conversation, reading and writing with kanji, and culture throughout the semester with the goal of understanding and handling everyday Japanese life. As with many languages, Japanese contains a variety of social language—the class will focus on language that is acceptable to all Japanese individuals.

**Advanced Japanese IV**

Not offered 2017-18

Full-year course open to students in grades 9-12; fulfills the fourth year of a four-year commitment. Prerequisite: successful completion of *Japanese I* through *III*, or permission from the department chair.

*Japanese IV* develops further knowledge of vocabulary, idioms, compositions, grammar, and the nature of language through comparisons between the Japanese and English languages including kanji. This course will enhance understanding of the Japanese language, concepts, and ideas on diverse topics related to contemporary life in Japan. Students will learn to distinguish various styles and forms of speech, such as the formal and informal, and male and female speech. Students will also study Japanese culture, society, and products, and how they relate to one another.

**AP Japanese Language and Culture**

Not offered 2017-18

Full-year course open to students in grades 9-12. Prerequisite: Successful completion of *Japanese I* through *IV*, or permission from the department chair.

Students will develop productive, receptive, and cultural skills necessary to communicate with native speakers of Japanese. Moreover, the goal is to expand their ability to communicate in a culturally appropriate manner and in increasingly widened contexts. This class exhorts the further development in vocabulary, idioms, compositions, grammar, and the nature of the language through the comparisons of English language. The course articulates three modes of communication: interpersonal, interpretive, and presentational. The course also addresses cultural competence, connections to other school disciplines, and comparisons between the target language and culture. Students will develop different ways of thinking about the world and come to a richer understanding of their own language and culture.

**Latin I**

Full-year elective. Open to students in grades 10-12 at the discretion of the department chair.

This course is open to students who have already completed or are completing their third year of their language requirement. Students who are in the fourth or fifth level of world language study are also eligible to take Latin I. This course does not satisfy the graduation requirement for language. Students receive credit for the course as an elective. In Latin I, students learn to read Latin at the beginning level, to understand the culture and civilization of Rome from its beginnings through the time of empire, to study English vocabulary in relation to Latin, and to respond personally to a classical language structure and literature.

**Latin II**

Full-year elective. Open to students in grades 10-12 at the discretion of the department chair.

This course is open to students who have successfully completed Latin I. Latin II does not fulfill the graduation requirement for language; students receive credit for the course as an elective. Latin II continues the development of grammar, vocabulary, and structure of Latin begun in the first year course. Advanced grammar topics include the subjunctive mode, subordinate clauses, indirect statement, questions and commands, the ablative absolute and other case specific structures, and deponent and passive verbs. The study of English derivations from Latin continues. During the second semester, students read selections of original prose and poetry in Latin as well as study the history and culture of the early empire.

### ***Spanish I***

Full-year course; fulfills the first year of the graduation requirement.

Students entering the Academy after the seventh grade and electing to study Spanish have the opportunity to enroll in *Spanish I*. This course is designed for students new to the school who have had either no formal study of Spanish or limited exposure to the language. On the recommendation of the seventh grade teachers, students advancing to the eighth grade from the 6-7 Division may also be placed in *Spanish I*. On completion of Spanish I students may enter *Spanish IIA* or *Spanish II* at the recommendation of the teacher. *Spanish III* is also offered.

### ***Spanish IA***

Full-year course available to students in grades 8-12; fulfills the first year of the graduation requirement.

The class is conducted mainly in Spanish, and students learn to express themselves in idiomatic Spanish and to read with increasing comprehension. Emphasis is placed on oral expression and aural comprehension through conversation, drills on speech patterns, and discussion of readings and short oral presentations in Spanish. Correct usage is stressed throughout the year and there is considerable emphasis on writing. In the spring semester all Spanish IA students participate in a multifaceted project dealing with South America's Andean nations. In addition, the use of technology for research, communication and learning in Spanish is integral to this course.

### ***Spanish II***

Full-year course available to students in grades 9-12; fulfills the second year of the graduation requirement.

This is the continuation course for students successfully completing Spanish I. Many of the students in the class will have entered Albuquerque Academy after seventh grade and have not had the benefit of the Spanish language background provided by the 6-7 program. On the recommendation of the teacher, students advancing from *Spanish IA* may be placed in *Spanish II*. This course uses an integrated approach to language learning. Grammatically, the emphasis is on verb conjugations, vocabulary, "to be" verbs, and pronouns. There are creative cultural projects both semesters which require the student to integrate the skills learned from the text.

### ***Spanish IIA***

Full-year course available to students in grades 9-12; fulfills the second year of the graduation requirement. Prerequisite: successful completion of *Spanish IA* or permission from the department chair.

This course continues the emphasis on understanding, speaking, reading, and writing idiomatic elementary Spanish. The formal study of grammar is largely completed during the year, and considerable attention is given to discussion in Spanish of the books and stories which are read. The building of an active basic vocabulary and correct grammatical usage are principal aims of the second semester's emphasis on composition.

### ***Spanish III***

Full-year course available to students in grades 10-12; fulfills the third year of the graduation requirement.

This course is the continuation of the *Spanish II* course. It is designed for students who have entered Albuquerque Academy after seventh grade and who have not had the benefit of the Spanish language background provided in the 6-7 Division. On the recommendation of the teacher, students advancing from Spanish IIA may be placed in Spanish III. The course uses an integrated approach to language acquisition with an emphasis on all four language skills. In addition, students work independently and in small groups on projects that enable them to use their acquired language skills. There is increasing emphasis on oral proficiency.

### ***Spanish IIIA***

Full-year course available to students in grades 10-12; fulfills the third year of the graduation requirement. Prerequisite: successful completion of *Spanish IIA* or permission from the department chair.

This course is conducted almost entirely in Spanish, and is designed to provide the students with increasing ability to communicate effectively in Spanish and to read easily and write idiomatically. It is also designed to enable students to learn—through readings and class discussions—something of the cultures of the Spanish-speaking world. The reading material helps to expand the students' active vocabulary and serves as an introduction to the analysis of literature.

### ***Spanish IV Conversation and Composition***

Full-year elective open to students in grades 11 and 12. Prerequisite: successful completion of *Spanish III, IIIA*, or permission from the department chair.

This course is designed for students who have successfully completed their language requirement and who wish to continue their study of Spanish. The major goal of the class is to promote oral and written communication. Students will review the fundamental structures of grammar, and should expect frequent and comprehensive lists of vocabulary and idiomatic expressions. Course components include units on Spanish-speaking communities in the United States and abroad, daily life situations, and student-initiated research projects. The cultural component of this course consists of short readings, music, and videos. Reading serves as a basis for general discussions, rather than for close literary analysis. Spanish IV emphasizes activity-based learning and requires active oral participation. Evaluation is based upon grammar and vocabulary quizzes, oral presentations and projects, and daily participation that demonstrates a genuine interest in proficiency. Given the nature of this course, both semester exams will consist of oral presentations.

### ***Spanish V Topics***

Full-year elective open to students in grades 11 and 12. Prerequisite: successful completion of *Spanish IV, AP*, or permission from the department chair.

This course is designed for those students who have successfully completed the Spanish IV or AP Spanish Language course and who wish to continue with the study of the language in a class emphasizing oral communication. Course components include units on Chicano literature, magical realism in Latin America, and independent projects designed by the students themselves. When deemed appropriate by the instructor and the students enrolled, an entire term may be dedicated to the study and performance of a major dramatic work, or a series of one-act plays in Spanish; recent works so performed include those of playwrights such as the Mexican Emilio Carballido and the Spaniard Miguel Mihura. Students are also asked to review important grammatical structures each term, to learn and use a significant amount of new vocabulary and idiomatic expressions, and to submit regular written compositions based on a variety of themes and cultural topics. The primary focus, however, is on oral proficiency in meaningful contexts, through structured and unstructured conversations as well as formal oral presentations. The most significant feature of this course is that students are expected to be active contributors to class discussion each and every day—the effort to produce oral language is the underlying factor in increasing one’s linguistic confidence and speaking proficiency.

### ***AP Spanish Language***

Full-year elective open to students in grades 11 and 12. Prerequisite: successful completion of *Spanish IIIA* or permission from the department chair.

This course prepares students for the Advanced Placement examination in Spanish language. The course stresses the ability to comprehend formal and informal spoken Spanish, the acquisition of vocabulary, and reading from authentic materials as well as modern Hispanic works by Borges, García Lorca, Unamuno, García Márquez, and other authors. There is substantial emphasis placed on the ability to express ideas orally with accuracy and fluency. Composition and a thorough review of grammatical points are also integral parts of the course. Cultural units include projects on art history, geography, and other historical and cultural topics.

### ***AP Spanish Literature and Culture***

Full-year elective open to students in grades 11 and 12. Prerequisite: successful completion of *AP Spanish Language* or permission from the department chair.

This survey course deals with Spanish and Spanish-American literature beginning with the Medieval and Golden Ages and ending with the 20th century. The prescribed list includes a variety of genres and well-known authors from Miguel de Cervantes to Gabriel García Márquez. Through an intensive study of works from the Hispanic United States, Latin America, and Spain, the student becomes more familiar with the literary heritage of the Spanish-speaking world. By the end of the course, students should have achieved a high degree of proficiency in aural comprehension, speaking, reading, writing, and literary analysis. Students will be well prepared to take the Advanced Placement Spanish literature examination.

## 8TH GRADE COURSES

### Counseling and Human Development

CHD080 Health Issues 8 (F/S)

### English

ENG080 English 8 (Y)

### History

HIS080 World History to 800 C.E. (Y)

### Mathematics

MAT080 Pre-Algebra/Mathematics 8 (Y)

MAT081 Mathematics 8 (Y)

MAT082 Alg I/Geo for Eighth Only (Y)

### Performing Arts

PER101 Concert Band (Y)

PER111 Chorus I—Vivace (Y)

PER121 String Consort (Y)

PER131 Classical Guitar I (Y)

PER132 Classical Guitar II (Y)

PER151 Intro to Theatre (Y)

PER171 Foundation in Dance (Y)

PER175 Dance Technique II (Y)

PER181 World Dance II (Y)

### Physical Education

PHY080 Physical Education 8 (Y)

### Science

SCI080 Earth Systems 8 (Y)

### Visual Arts

VIS080 Foundation in Art (Y)

### World Languages

LAN080 Spanish I (Y)

LAN081 Spanish IA (Y)

LAN082 French I (Y)

LAN083 German I (Y)

LAN087 American Sign Language I (Y)

## 9TH–12TH GRADE COURSES

### Counseling and Human Development

CHD600/700 Health Seminar 10 (F/S)

### English

ENG100 English I (Y)

ENG200 English II (Y)

ENG300 Advanced English III (Y) (^)

ENG301 Adv. English III/U.S. History (Y) (^)

ENG401 Adv. English IV—Encounters (Y) (^)

ENG402 Adv. English IV—Tempting Fate (Y) (^)

ENG403 Adv. English IV—Literature/Mind (Y) (^)

ENG404 Adv. English IV—Comedy/Humor (Y) (^)

ENG405 Adv. English IV—Philosophy & Lit (Y) (^)

ENG501 Creative Writing (Y)

ENG601 Creative Nonfiction (F)

ENG701 Creatively Speaking (S)

### Experiential Education

EXP501 Outdoor Leadership (Y)

EXP611 Outdoor Pursuits—River & Rock (F)

EXP612 Outdoor Pursuits—Mountain Biking(F)

### History

HIS100 World History to 1789 (Y)

HIS200 World History since 1789 (Y)

HIS201 AP European History (Y) (^)

HIS202 AP World History (Y) (^)

HIS300 United States History (Y)

HIS301 Adv. U.S. History/English III (Y) (^)

HIS302 AP United States History (Y) (^)

HIS400 Adv. Senior Humanities (Y) (^)

HIS501 AP Micro/Macro Economics (Y) (^)

HIS502 AP Comparative Gov't & Politics (Y) (^)

HIS503 History of the Universe (Y)

VIS594 AP Art History (Y) (^)

## Mathematics

MAT100 Algebra I (Y)

MAT101 Algebra I/Geometry (Y)

MAT102 Geometry/Algebra II for Ninth Only (Y)

MAT200 Geometry (Y)

MAT201 Geometry/Algebra II (Y)

MAT300 Algebra II/Trigonometry (Y)

MAT301 Advanced Trigonometry/Pre-Cal (Y) (^)

MAT302 Adv. Trig/Pre-Cal Through Modeling (Y) (^)

MAT400 AP Statistics (Y) (^)

MAT401 AP Calculus AB (Y) (^)

MAT402 AP Calculus BC (Y) (^)

MAT501 Advanced Logic and Probability (Y) (^)

MAT601 Math Analysis I (F)

MAT602 Advanced Multi Calculus I (F) (^)

MAT701 Math Analysis II (S)

MAT702 Advanced Multi Calculus II (S) (^)

### Performing Arts

PER501 Concert Band (Y)

PER502 Symphonic Band (Y)

PER503 Advanced Symphonic Band (Y) (^)

PER505 Jazz Ensemble (Y)

PER506 Adv. Jazz Ensemble (Y) (^)

PER511 Chorus I—Vivace (Y)

PER512 Chorus II—Cantabile (Y)

PER513 Advanced Chorus I (Y) (^)

PER515 Voice (Y)

PER521 String Consort (Y)

PER522 Chamber Players (Y)

PER523 Adv. Chamber Players (Y) (^)

PER531 Classical Guitar I (Y)

PER532 Classical Guitar II (Y)

PER533 Classical Guitar III (Y)

PER534 Classical Guitar IV (Y)

PER535 Advanced Guitar Ensemble I (Y) (^)

PER536 Advanced Guitar Ensemble II (Y) (^)

PER541 Advanced Music Theory (Y) (^)

PER551 Intro to Theatre (Y)

PER552 Acting Styles (Y)

PER553 Advanced Directing and Playwriting (Y) (^)

PER554 Advanced Theatre Projects (Y) (^)

PER561 Stagecraft (Y)

PER562 Technical Design (Y)

PER571 Foundation in Dance (Y)

PER575 Dance Technique II (Y)

PER576 Dance Technique III (Y)

PER577 Advanced Dance Technique (Y) (^)

PER581 World Dance II (Y)

PER582 World Dance III (Y)

PER583 Advanced World Dance (Y) (^)

### Physical Education

PHY100 Physical Education 9 (Y)

PHY501 Outdoor Leadership (Y)

PHY601 Weight Training (F)

PHY602 Group Sports (F)

PHY603 T'ai Chi Chih (F)

PHY604 Yoga (F)

PHY611 Outdoor Pursuits—River & Rock (F)

PHY612 Outdoor Pursuits—Mountain Biking(F)

PHY671 Foundation in Dance (F)

PHY675 Dance Technique II (F)

PHY676 Dance Technique III (F)

PHY681 World Dance II (F)

PHY682 World Dance III (F)

PHY690 Independent Study Project (F)

PHY701 Weight Training (S)

PHY703 T'ai Chi Chih (S)

PHY704 Yoga (S)

PHY771 Foundation in Dance (S)

PHY775 Dance Technique II (S)

PHY776 Dance Technique III (S)

PHY781 World Dance II (S)

PHY782 World Dance III (S)

PHY790 Independent Study Project (S)

## Science and Computer Science

SCI160 Physics I (F)

SCI170 Chemistry I (S)

SCI511 Biology E: Ecology Emphasis (Y)

SCI512 Biology M: Molecular Emphasis (Y)

SCI513 AP Biology (Y) (^)

SCI514 AP Environmental Science (Y) (^)

SCI531 Chemistry II (Y)

SCI532 AP Chemistry (Y) (^)

SCI533 Organic and Biochemistry (Y)

SCI541 AP Physics I (Y) (^)

SCI542 Advanced Trig-Based Physics (Y) (^)

SCI543 AP Physics C (Y) (^)

SCI601 Anatomy and Physiology I (F)

SCI602 Astronomy (F)

SCI701 Anatomy and Physiology II (S)

SCI702 Electronics (S)

SCI703 Intro to Forensic Science (S)

HIS503 History of the Universe (Y)

COM501 AP Computer Science A (Y) (^)

COM502 AP Computer Science Principles (Y) (^)

COM601 Python I (F)

COM602 C++ I (F)

COM701 Python II (S)

COM702 C++ II (S)

COM703 NetLogo (S)

### Visual Arts

VIS100 Foundation in Art (Y)

VIS511 Photo-Digital Design I (Y)

VIS512 Photo-Digital Design II (Y)

VIS513 Advanced Photo-Digital Design III (Y) (^)

VIS521 Drawing and Painting I (Y)

VIS522 Drawing and Painting II (Y)

VIS523 Advanced Drawing and Painting III (Y) (^)

VIS531 Sculpture I (Y)

VIS532 Sculpture II (Y)

VIS533 Advanced Sculpture III (Y) (^)

VIS541 Ceramics I (Y)

VIS542 Ceramics II (Y)

VIS543 Advanced Ceramics III (Y) (^)

VIS561 Printmaking (Y)

VIS591 AP Studio Art: Drawing (Y) (^)

VIS592 AP Studio Art: 2-D Design (Y) (^)

VIS593 AP Studio Art: 3-D Design (Y) (^)

VIS594 AP Art History (Y) (^)

VIS601 Video Art I (F)

VIS701 Video Art II (S)

### World Languages

LAN110 Spanish I (Y)

LAN111 Spanish IA (Y)

LAN120 French I (Y)

LAN130 German I (Y)

LAN170 American Sign Language I (Y)

LAN210 Spanish II (Y)

LAN211 Spanish IIA (Y)

LAN220 French II (Y)

LAN230 German II (Y)

LAN260 Japanese II (Y)

LAN310 Spanish III (Y)

LAN311 Spanish IIIA (Y)

LAN320 French III (Y)

LAN330 German III (Y)

LAN350 Arabic III (Y)

LAN410 Spanish IV (Y)

LAN411 AP Spanish Language (Y) (^)

LAN420 Advanced French IV (Y) (^)

LAN430 Advanced German IV (Y) (^)

LAN440 Advanced Chinese IV (Y) (^)

LAN510 Spanish V Topics (Y)

LAN511 AP Spanish Literature and Culture (Y) (^)

LAN520 AP French Language and Culture (Y) (^)

LAN530 AP German Language and Culture (Y) (^)

LAN591 Latin I (Y)

LAN592 Latin II (Y)

# Five-Year Course of Study Worksheet

<b>Grade 8</b>	Required	<b>Fall</b>	<b>or</b>	<b>Full-Year</b>	<b>or</b>	<b>Spring</b>
		_____		_____		_____
		_____		_____		_____
	Electives	_____		_____		_____
		_____		_____		_____
		_____		_____		_____
<b>Grade 9</b>	Required	<b>Fall</b>	<b>or</b>	<b>Full-Year</b>	<b>or</b>	<b>Spring</b>
		_____		_____		_____
		_____		_____		_____
	Electives	_____		_____		_____
		_____		_____		_____
		_____		_____		_____
<b>Grade 10</b>	Required	<b>Fall</b>	<b>or</b>	<b>Full-Year</b>	<b>or</b>	<b>Spring</b>
		_____		_____		_____
		_____		_____		_____
	Electives	_____		_____		_____
		_____		_____		_____
		_____		_____		_____
<b>Grade 11</b>	Required	<b>Fall</b>	<b>or</b>	<b>Full-Year</b>	<b>or</b>	<b>Spring</b>
		_____		_____		_____
		_____		_____		_____
	Electives	_____		_____		_____
		_____		_____		_____
		_____		_____		_____
<b>Grade 12</b>	Required	<b>Fall</b>	<b>or</b>	<b>Full-Year</b>	<b>or</b>	<b>Spring</b>
		_____		_____		_____
		_____		_____		_____
	Electives	_____		_____		_____
		_____		_____		_____
		_____		_____		_____

**Counseling and Human Development**  
Complete the required semester courses in grades 8 and 10.

**English**  
Complete the full-year required course each year.

**Experiential Education**  
Complete the required activities for grade 9.

**History**  
Complete the full-year required course each year.

**Language**  
Complete at least level three of at least one language. Complete at least level four of at least one world language.

**Mathematics**  
At least a three-year sequence through at least Algebra II/Trig. Typical progressions:

Standard sequence	Advanced sequence
1. Algebra I	1. Algebra/Geo
2. Geometry	2. Geo/Algebra II
3. Algebra II/Trig	3. Trig/PreCal

**Physical Education**  
8 & 9: Join an Academy team or go to PE class all year.  
10: Two seasons of sports, two semesters of PE, or one of each.  
11 & 12: One season of a sport or one semester of PE.

**Science**  
At least one full-year course or combination of semester courses each from the Life Sciences Group and the Physical Sciences Group after completing the required courses in grades 8 and 9.

**Visual and Performing Arts**  
Two credits of visual and/or performing arts courses for students in attendance at the Academy during grade 8. One credit for those entering the Academy after grade 8.