ATLANTA GIRLS' SCHOOL

Course Catalog

2017-2018

Inspiring Girls to Lead Lives of Purpose

Atlanta Girls' School
Course Catalog 2017-18

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Mission Statement

Inspiring Girls to Lead Lives of Purpose

Portrait of an AGS Graduate

The purpose of the educational program at Atlanta Girls' School is to instill in students the strengths of character, competence, and reflection needed for its students to lead full and productive lives and to help students become responsible citizens, ready to face the challenges the world will present. Together these characteristics paint the Portrait of an AGS Graduate.

The Portrait guides our work and informs how we evaluate and structure all our programs—from the classroom to the playing field and with the community. Teachers, coaches, club advisors, and administrators begin with the end in mind, with intentional and thoughtful attention to the Portrait.

Our graduates are equipped with:

CHARACTER An Atlanta Girls' School graduate will be:

- Authentic—becomes fully one's self and fearless
- Compassionate—serves for the benefit of others
- Resilient—possesses courage and leads with confidence
- Ethical—acts with honor and integrity
- Generous—practices giving with a gracious attitude

COMPETENCE An Atlanta Girls' School graduate possesses:

- Logic and Creativity—solves problems thoughtfully
- Communication—speaks publicly with confidence; expresses herself through writing
- Cultural Intelligence—understands global perspectives and values
- Collaborative Solutions—works effectively with others of diverse backgrounds
- Discernment and Prioritization—makes good decisions, personally and academically

REFLECTION An Atlanta Girls' School graduate is:

- Self-Aware—understands the power and responsibility of her own voice
- Adaptive—persists and find success with flexibility
- Responsive—advocates with an open-mind and willingness to try
- Empathetic—cares deeply for others
- Healthy—exercises good choices for mind, body, and relationships

Academic Program

OVERVIEW

Atlanta Girls' School bases its education on two different but complementary principles. First, the school believes that innovation must chart our course. The world we face is on the cusp of monumental changes in human knowledge, changes that may make the world of our grandchildren different from ours today. Schools must adapt to these changes. Facts are far less meaningful than the ability to learn and the confidence to adapt. This every-changing world will be charted not by remembering things from school, but by having the skills to learn the new things required to live in it. Just as innovation will power the world, schools must be innovative in helping their students learn how to learn and apply their knowledge effectively in an ever-changing world.

Second, as a girls' school, AGS believes in the centrality of relationship. Whether it is a relationship between two students, a student and a teacher, a new idea and a practical experience, or a new skill and its application, relationships are how girls learn. Relationships frame the community both in and out of the classroom and shape the ways ideas are learned and new skills are acquired. Together, innovation and relationship make Atlanta Girls' School a place where girls learn best for the world they will inherit.

In applying these principles in concrete ways to create a purposeful education, Atlanta Girls' School uses the Portrait of an AGS Graduate to inform all its programs. Upon graduation, each student should have achieved her own distinct form of excellence in those matters outlined in the Portrait, and AGS purposefully crafts its curriculum and designs its sequence of courses to achieve that end result.

ACADEMIC DISCIPLINES

Atlanta Girls' School offers courses in the traditional college-preparatory areas of:

- English
- Mathematics
- World Studies
- Science
- World Languages
- Fine Arts: the visual and performing arts, including music and drama
- Physical Education

Standards promoted by national and international professional organizations in each discipline are the foundation of our academic program. Additional guidelines such as the Southern Association of Independent Schools (SAIS), the Southern Association of Colleges and Schools (SACS), and the College Board inform our academic standards. Atlanta Girls' School is fully accredited by SAIS and SACS and is a member of the National Association of Independent Schools and the National Coalition of Girls' Schools.

CURRICULUM

AGS is committed to providing an excellent and rigorous college-preparatory curriculum and, at the same time, serving the individual needs and interests of its students. We are also committed to permitting

students to advance at a pace appropriate for them and consistent with appropriate mastery upon graduation. Accordingly, we offer honors math and science courses and advanced placement courses to qualified students and college-level classes as well as online learning in appropriate situations. In keeping with the goal of molding the AGS Graduate and acknowledging that real-world problems often fail to present themselves as strictly math, history, or English, AGS classes emphasize interdisciplinary work, technology, multi-cultural and global perspectives, and ethical and aesthetic considerations.

In this catalog, courses offered for the 2017-2018 school year are detailed, and a projection of probable courses to be offered in the next four years is outlined in the Upper School Sequence of Courses on page 9.

ACADEMIC CALENDAR AND REPORTING

The academic calendar at AGS consists of two semesters, each divided into two quarters. Between semesters is a short Winterim term, which allows for enriching interdisciplinary studies that are not graded but that allow students to explore new topics more deeply.

Parents receive narrative reports on student progress at the end of the first and third quarters. At the end of each semester, semester grades are posted online. In Upper School, these grades become the student's official transcript. Family conferences, which are led by the student, are held twice a year. The purpose of the conference is to present a holistic assessment of the student's academic, social, and co-curricular, learning and helps to evaluate progress toward long-term goals.

Teachers update grades regularly each month, often within a week of completing an assessment period.

Middle School Program

Our aim in the middle grades is to develop in every girl the habits of excellence, care, respect, and hard work that will undergird her academic and social growth so that she develops into a thoughtful, reflective, academically successful Upper School student. All members of the community work together to set and communicate high expectations and to equip students with the strategies and tools necessary for them to meet those expectations. The strong student-faculty relationships grown at AGS ensure that our students complete Middle School with a firm grounding in these life-forming habits.

Recognizing that girls learn best when they see relationships between subjects and meaning within topics, AGS Middle School faculty members create classrooms full of hands-on, relevant activities, collaborative learning experiences, and connection-making conversations. In an environment like this, girls learn to understand the power of their voices and develop the confidence to express their perspectives and seek understanding by asking questions.

The academic program is built around the traditional Upper School disciplines, but integration of studies is emphasized. For example, our STEAM—Science, Technology, Engineering, Arts, and Mathematics—strand was founded on the premise that spatial-reasoning skills (the cornerstone of science) are effectively taught to girls through the arts. In addition, course content is aimed at developing basic study and organizational skills. Students cultivate an ability to look at information through different perspectives. In each discipline, specific approaches to communicating and investigating ideas are introduced. At the completion of Middle School, students are prepared to use the protocols of mathematical, scientific, literary, historical, and aesthetic investigation. All students learn to use 21^{sT}-century technology as a daily resource and tool.

Students in AGS Middle School carry seven classes per semester, each of which meets for three and a half hours per week. Homework is assigned daily. Student schedules include courses in English, mathematics, world studies, world languages, science, fine arts, and physical education.

AGS defers the introduction of world language until the seventh grade. We believe that students in the sixth grade should be introduced to the foundations of world languages. In the sixth grade, students study Greek and Latin roots within the English curriculum and, in doing so, develop a more robust understanding of grammar as a foundation for later modern language study and to facilitate the acquisition of English vocabulary, grammar, and language structure skills. In collaboration with advisors, most seventh and eighth grade students begin world language and chose an introduction to French or Spanish class.

Middle School Sequence of Courses

SIXTH GRADE CURRICULUM

The sixth grade schedule is standard for all students. The following are required yearlong courses:

- English 6 and Language Foundations
- Math 6
- World Studies 6
- Science 6: Earth Science and STEAM Foundations
- PE
- Fine Arts 6 (Divided into two semester-long courses: Visual Art 6 and Performing Arts 6)

SEVENTH GRADE CURRICULUM

The seventh grade schedule is standard for all students. The following are required yearlong courses:

- English 7
- Pre-Algebra, Algebra I, or Honors Algebra I
- Life Science
- World Studies 7
- French 7 or Spanish 7
- PE

Additionally, seventh grade students choose one of the following courses:

- Chorus
- Middle School Theatrical Arts
- Production Design
- 2D Foundations
- 3D Foundations

EIGHTH GRADE CURRICULUM

The eighth grade curriculum is standard for all students. The following are required yearlong courses:

- English 8
- Algebra I, Honors Algebra I, Geometry, or Honors Geometry
- Physical Science
- World Studies 8
- French or Spanish
- PE

Additionally, eighth grade students choose one of the following courses:

- Chorus
- Middle School Theatrical Arts
- Production Design
- 2D Foundations
- 3D Foundations

Upper School Program

The primary role of the Upper School is to prepare students to succeed in college and in life through a liberal arts course of study. Course content is aimed at synthesis, analysis, and critical evaluation of ideas as well as basic content coverage. The goal is to grow a student with the strengths of character, competence, and reflection that enable her to have strong choices in college selection appropriate for her and to successfully navigate the world beyond secondary school.

Students in AGS Upper School carry a minimum of five and a maximum of seven academic classes per semester, each of which meets for three and a half hours per week. Homework is assigned daily, and students regularly have long-term projects. Students enrolled in Honors and AP classes can expect a heavier homework load and may elect a study period. Student schedules include courses in English, mathematics, world studies, science, languages, fine arts, and physical education. Time management is an essential Upper School skill.

In the ninth grade, a common program of five core courses plus PE facilitates the transition from Middle to Upper School for all students. Students in the ninth grade choose one fine arts course. In the tenth and eleventh grades, more choices are offered and more prerequisites are required. In addition, AP work is an option in some disciplines by teacher recommendation. Electives and internships are a significant part of the junior and senior year programs.

At the completion of Upper School, students are prepared for college matriculation. Each student works closely with her teachers, parents, advisors, and mentors to assure that individual objectives are met. The ultimate goal is to shape AGS graduates into students who are knowledgeable and responsible citizens of the world and who are confident and courageous in meeting the challenges of the world in business, school, the arts and sciences, and personal life. Building on a solid academic base and on the confidence that her uniqueness is appreciated and valued, the successful graduate will have learned to trust her own judgment, to believe in herself, and to have confidence in her future decisions.

Upper School Graduation Requirements

Students in grades nine through twelve are expected to take a minimum of five and a maximum of seven academic courses per year. For college admission purposes, six classes are recommended unless the student carries a heavy AP load. A total of 23 credits is required for graduation. Each yearlong course constitutes one credit; each semester-long course constitutes one-half credit.

English	4 credits
Mathematics *Three years of mathematics, including one year beyond Algebra II, are required.*	3 credits
World Languages *Three years of the study of one language at the Upper School level are required.*	3 credits
Science *Three years of lab science are required (Biology, Chemistry, and Physics).*	3 credits
World Studies	3 credits
Fine Arts	2 credits
Physical Education	1 credit
Electives *An elective is a course taken in any discipline beyond graduation requirements.*	4 credits
Minimum Total Credits Required	**23 credits**

All AGS students are also ***required*** to participate in class-organized community service, join a club, complete EDLS coursework, complete internships during junior and senior years, participate in the global travel program, and deliver a senior speech prior to being recommended for graduation.

Upper School Courses

Subject	Required Courses	Advanced and Elective Courses offered on campus
English (4)	English 9: Approaches to Literature and Language English 10: British Literature and Writing English 11: American Literature and Writing English 12: Literature and Ideas	AP English Language and Composition AP English Literature and Composition
Math (3)	Geometry (H) Algebra II (H)	Algebra III Pre-Calculus/Trigonometry (H) Calculus AP Calculus AB
World Studies (3)	World Studies 9: Revolutions Reshape the World World Studies 10: The 20th Century and Today World Studies 11: United States History	AP US History AP Human Geography World Religions Economics and Entrepreneurship
Science and Technology (3)	Conceptual Biology Biology Methods (H) Conceptual Chemistry Chemistry Methods(H) Conceptual Physics	AP Chemistry AP Environmental Science AP Physics I Computer Science Principles Engineering and Design
World Language (3)	French and Spanish Levels I, II, III, IV	AP Spanish or French Advanced Language and Culture (French and Spanish)
Performing and Visual Arts (2)	Chorus Hurricane Chorus (Audition Required) Intermediate Theatrical Arts 2D Composition and Media Ceramics: Hand Building Production Design	Advanced Theatrical Arts Directing Resume and Audition Prep Drawing Painting Photography Graphic Design Ceramics: Wheel Throwing Literary Arts: Creative Writing
Fitness and Wellness (1)	PE and Wellness 9	Conditioning Get Moving! Aerobic Exercise

(H) Honors Placement: Honors courses are offered for students who wish to cover topics in depth and at an accelerated pace. Admission to honors courses requires the recommendation of the faculty. Faculty holistically considers each student's readiness when making such recommendations.

(AP) Advanced Placement: AP Courses are college-level courses. Content is determined by the College Board, which administers a required exam in May. College credit may be earned based on the results of this exam. Admission to AP courses requires the recommendation of the faculty. Faculty holistically considers each student's readiness when making such recommendations. AP courses prepare students for the College Board exams, and all students registered for an AP course will sit for the national exam.

Upper School Planning Worksheet

This chart is for planning purposes. List the courses taken in the Upper School during your previous years and the courses being taken this year. Fill in the courses that you plan to take for the remaining years. Use this planning worksheet to check that you have a plan that fulfills graduation requirements and that you have all the prerequisite courses that you need for advanced courses.

This plan will be useful as you begin to look for a college. You can check that you are fulfilling admission requirements for individual colleges. Use this chart when discussing plans with your advisor.

Grade Level	9th	10th	11th	12th
English				
Mathematics				
World Studies				
Science				
Language				
Fine Arts				
Physical Education & Wellness				
Other Electives				

English Department

MIDDLE SCHOOL ENGLISH

Middle School English provides a solid foundation in the use and understanding of the English language. Writing, grammar, reading, and vocabulary are integral parts of the English courses. Students begin practicing and polishing skills pertaining to different types of writing, such as narrative, expository, persuasive, and descriptive. With an emphasis on self-expression and expression of ideas, writing assignments encourage students to begin literary analysis and produce logical arguments in writing. Reading comprehension is developed through the study of diverse texts, including significant and classic pieces of literature. Vocabulary and grammar are part of every course, studied both independently and in the context of reading and writing.

English 6 and Language Foundations

In a double block of English developed around the theme of discovering identities through stories and storytellers, students participate in an integrated study of reading, literature, vocabulary, grammar, and writing. By responding critically and finding personal meaning through the exploration of novels, poetry, short stories, and drama, students will become active readers as they analyze, assess, and share a variety of works. Grammar and vocabulary usage are taught directly and in context as students are asked to master concepts by examining models from literature as well as their own writing. A goal of the course is to bolster each student's confidence in her own ability to write and to encourage risk taking in written expression. This course lays a strong foundation for students that will support reading and writing across disciplines as well as the acquisition of a second language in the years to follow.

English 7: Identity and Expression

In the seventh grade, the reading program supports and broadens students' growing familiarity with literature of all types and encourages critical reading. Annotation is introduced to encourage personal reflection as part of textual analysis. Students become active readers as they analyze a variety of works, composing their own interpretive questions and answers. Students learn about literary genres including novels, short stories, poetry, and drama. Vocabulary and grammar, important focus areas of the Middle School curriculum, are taught directly and in context. Academic writing assignments emphasize the intersection of form and content in an essay.

English 8: Literature and Writing

Students will study various literary genres with particular emphasis on the short story and the novel, allowing each girl to explore and shape a vision of the world and the human condition, both past and present. As students read, they will observe the effective use of diction, figurative language, and sentence structure as well as experiment with these stylistic techniques in their own writing. Grammar and sentence structure improve as students practice longer and more sophisticated types of writing, including formal, analytical essays. Eighth grade English emphasizes critical thinking, independent reading, and analytical writing through an extensive anthology project.

UPPER SCHOOL ENGLISH

Upper School English develops a student's ability to understand and appreciate great works of literature and to respond to literary selections through oral presentation and in writing, both creatively and formally. Writing, grammar, and vocabulary are integral parts of Upper School English courses as students expand and polish their writing skills. Upper School English focuses on the use of a diverse selection of texts as a springboard for argument and thesis-driven papers. Vocabulary and grammar are studied through direct instruction, and literary models serve to develop and strengthen a personal writing style.

English 9: Approaches to Literature and Language

In this course, students will examine sophisticated literary texts and learn to speak and to write comfortably about literature using literary terms. A varied reading program will support and broaden each student's growing familiarity with literature and will encourage independent critical analysis where students will explore the complexities and precision of language. Composition is an integral component of the course with students regularly crafting written responses to their reading and current topics of interest. Students will experiment with language in a variety of writing assignments and will revise pieces throughout the year with a focus on grammar and mechanics to strengthen composing and editing skills and to develop a personal writing style. Independent reading and vocabulary enrichment continue as important elements of the English curriculum.

English 10: British Literature and Writing

This course provides the student with a comprehensive overview of British literature from its beginnings in epic poetry to present works. Students study major writers and their works from both an intellectual and a historical perspective. There is a heavy concentration of poetry in this course, and students will learn to identify and analyze how authors use poetic devices, such as figurative language, alliteration, rhyme scheme, and paradox, in order to convey meaning. Class discussions and writing workshops allow students to share insight in both verbal and written form in order to demonstrate their understanding and appreciation of the texts. Essays and critical reading assignments are required components of this course.

English 11: American Literature and Writing

A survey of major authors and their works puts the literature of the United States into a historical context in this course. Using the literary works of a variety of American authors from a variety of literary movements, students will explore the changing concept of the American Dream through analysis, discussion, research, and writing. In addition to writing multi-draft essays and creating presentations, students will also craft timed writing responses, lead class discussions, and pen personal responses to reading. Vocabulary is taught in literary context, and grammar and mechanics are addressed through writing workshops, essay revision, and paper conferences.

AP English Language and Composition

In keeping with the College Board's AP English course description, our focus will be on rhetoric: the art of constructing and presenting arguments in speech or writing. Our readings will include essays, novels, speeches, short stories, poems, and personal narratives by a diverse group of American authors who write for varied purposes and audiences. In reading and analyzing these

non-fiction, fiction, and poetry texts, our focus will be on identifying both the *what* and the *how*: *what* arguments the authors are making in the texts and *how* they use rhetorical strategies effectively to construct these arguments for their intended purposes and audiences. Because students are bombarded with thousands of images daily, they will also learn how to "read" such images to determine the artist's purpose, audience, and tone. Students will investigate several central questions regarding American cultural identity, as well as learn how to analyze and craft well-developed, well-supported, and persuasive arguments in writing. Discussions, writing assignments, and projects will be varied and will enable students to develop proficiency in the narrative, expository, argumentative, and persuasive modes. The course will culminate with a final essay and the required AP English Language & Composition Exam. *Prerequisites: English 11 AP Language and Composition requires a grade of A- or higher average in English 10 and a teacher's recommendation.*

English 12: Literature and Ideas

This course is designed to provide transition into a college English curriculum. Students will explore world literature through the study of complex literary texts. Moving toward independent criticism, students will identify an author's style by examining tone, diction, and syntax and will analyze the development of literary elements such as symbols, motifs, and theme. Working with novels, short stories, plays, poetry, essays, and criticism, students will continue to develop a sensitivity to and appreciation of the complexities and precision of language and will use works under study as models for their own writing. By composing, editing, and revising argumentative and persuasive essays, students will strengthen problem-solving and critical-thinking skills, writing skills, and researching skills. This course includes a study of rhetoric and oral presentation, culminating in the senior speech, an important senior requirement at AGS. Students will review grammar and the mechanics of writing in order to strengthen revising and editing skills. Independent reading and vocabulary enrichment continue as important components of the English curriculum.

AP English Literature and Composition

This course provides a transition into college English. The exploration of world literature will develop independent criticism: students will identify an author's style by examining tone, diction, and syntax and will analyze literary elements such as symbols, motifs, and theme. By composing, editing, and revising argumentative and persuasive essays, students will strengthen problem-solving and critical-thinking, writing, and researching skills. The study of rhetoric and oral presentation will culminate in the senior speech. AP English Literature and Composition is faster paced than English 12, with longer, more complex reading assignments and independent literary criticism. *Prerequisites: English 12 AP requires a grade of A- or higher average in English 11 and a teacher's recommendation.*

Mathematics Department

Each student progresses through the AGS mathematics program in a sequence appropriate for her. Teachers encourage students to learn through active discovery, to take risks, and to think creatively. Through collaboration, conversation, investigation, and hands-on practice, students develop conceptual understanding and computational proficiency. They use appropriate technology to communicate effectively and model accurately with mathematics. Within the curriculum, students revisit central topics each year, each time going into greater depth.

MIDDLE SCHOOL

The mathematics program initiates an intellectually stimulating environment where students learn to think critically, to solve complex mathematical problems, and to communicate effectively in mathematics. Students entering sixth grade begin with Math 6; by the eighth grade students are prepared to enter Algebra I or Geometry.

UPPER SCHOOL

The mathematics program is intended to prepare each student for college-level work in mathematics. Nearly all students take four years of mathematics in Upper School. After completion of Algebra I, students take Geometry followed by Algebra II. After Algebra II, students choose their mathematical course of study from a variety of classes. AGS enrolls students in AP Calculus BC and AP Statistics through Online School for Girls for girls completing the AGS curriculum after eleventh grade.

HONORS POLICY

Honors-level math work is offered after Pre-Algebra. Honors courses cover topics in depth and at an accelerated pace. At this level, we expect students who are thirsty to learn, maintain disciplined work habits, and seek out help when they need it. Because students learn best when they are placed in appropriate courses, the math department uses the following guidelines when placing students into honors-level courses:

- To move into an honors course from a standard course, a student must have a cumulative average of 93 between semesters in her current math class. With an average of 90-93 she may still be able to move into an honors-level course with additional course work.

- To remain at the honors level, a student must maintain a cumulative average of 83; with an average of 80-83 she may still be able to remain at honors-level work with additional coursework.

- In either case, she must also get a recommendation from her current math teacher.

Math 6
As the first math course for most entering sixth graders, this course lays the foundation for seven years of successful work in mathematics. Students learn through investigation, collaboration, and application. By using manipulatives and finding patterns, students develop a solid skill base in topics that include integer operations; order of operations, including exponents; fractions, decimals, and percentages; proportion and ratio; measurement and area; geometric shapes; and data displays. In addition, students develop study skills and organizational skills throughout the sixth grade curriculum.

Pre-Algebra
In this course, students begin to make the transition from concrete to more abstract mathematical concepts. Through in-depth investigations of the topics of ratio and proportion, data analysis, two- dimensional and three-dimensional geometry, probability, signed rational numbers, and solving equations, students deepen their understanding of the connections between these topics as they work to master the skills associated with them. This course uses contextually based problems to help deepen student understanding. In addition, students are expected to develop their abilities to solve unusual problems, communicate about mathematics, and reason through a mathematical argument.

Algebra I and Honors Algebra I
In this course, students begin to think about Algebra as a language and a way of communicating complex patterns and concepts succinctly and elegantly. Students will learn to represent situations through equations, graphs, and numerical patterns and to manipulate each of these representations in order to solve real-world problems. The focus of this course is to develop both a conceptual understanding and a computational fluency with the concepts of functions and linearity. Additional topics include recursive patterns, systems of linear equations, and exponential and quadratic functions. *Prerequisite: Pre-Algebra*

Geometry and Honors Geometry
In this course, students move from algebra skills to finding patterns in numbers, shapes, and figures. Through inductive reasoning, students make conjectures; through deductive reasoning, they prove those conjectures. Topics include angles and angle relationships, perpendicular and parallel lines, congruence and similarity, polygons and circles, transformations, constructions, and proof. In preparation for trigonometry, students begin studies in right triangle trigonometry and coordinate geometry. Students also learn a series of spatial reasoning skills in preparation for further design, engineering, science, and mathematics studies. *Prerequisite: Algebra I*

Algebra II and Honors Algebra II
At this mathematical level, students reinforce algebraic and geometric skills and further equip themselves with analytical, technological, and higher order algebraic skills. Students review and extend concepts of first year Algebra and Geometry, focusing on patterns in graphs and equations. They study topics including zeros and rates of change; asymptotes; linear, quadratic, and other polynomial functions; inequalities; systems of

equations; radical functions; complex numbers; exponential and logarithmic functions; step functions; and rational functions. Honors topics include transformations and mapping, conics, and trigonometric ratios. *Prerequisites: Algebra I and Geometry*

Algebra III
This course provides students another opportunity to master the fundamentals of Algebra and prepare for Pre-Calculus. Students reinforce skills through additional study of concepts covered in Algebra II. Topics include (but are not limited to) algebraic operations, equations and inequalities, functions and their properties, and number systems and operations. Students reinforce and expand these skills through application and exploratory activities with the graphing calculator and group projects. From this college-level algebra course, students may take Pre-Calculus/Trigonometry.
Prerequisites: Geometry and Algebra II

Pre-Calculus/Trigonometry and Honors Pre-Calculus/Trigonometry
Students in this course develop understanding of algebraic and trigonometric concepts and apply these concepts to real-world problem solving. Students examine polynomial, rational, algebraic, exponential, logarithmic, and trigonometric functions. They analyze these functions by hand and with the use of the technology. During the first semester, they work with advanced algebraic functions and they examine logarithmic and exponential functions. In the second semester, students explore trigonometry through triangles and the unit circle. In addition, they learn to work with sequences, series, and systems of equations. Students explore trigonometry through triangles and the unit circle. Students at the honors level study these concepts in greater depth.
Prerequisites: Geometry and Algebra II

Calculus
Students learn Calculus as the mathematics of change, focusing on conceptual understanding and showing its usefulness through algebraic, graphical, and numerical approaches. Students begin with a review of functions, graphical analysis, and a brief introduction to parametric equations. They continue with concepts of limits and continuity, followed by differentiation and integration of various functions. More specifically, students explore differentiation of exponential, logarithmic, and trigonometric functions; Newton's method; elementary techniques of integration to find areas between curves and volumes of solids; revolution; and L'Hopital's rule. Calculus prepares students for AP Calculus BC. *Prerequisites: Pre-Calculus/Trigonometry*

Advanced Placement Calculus AB
Students in AP Calculus explore multiple representations of concepts, expressing results and problems geometrically, numerically, analytically, and verbally. Through the use of unifying themes of derivatives, integrals, limits, approximation, and applications and modeling, they work to develop an understanding of calculus as a coherent body of knowledge and as a human accomplishment. The course is designed to be equivalent to one semester of college-level Calculus. Students enrolled in the course are required to take the College Board AP Calculus AB test in May.
Prerequisites: Pre-Calculus/Trigonometry and a teacher's recommendation

World Studies Department

Historical and Cultural Study of the Non-Western and Western Worlds

MIDDLE SCHOOL WORLD STUDIES

The World Studies Department at AGS seeks to give students an understanding of world cultures and history. A thematic and chronological approach is used, and students learn to make historical connections over time and shifting national boundaries. Current events are also discussed. Students actively use many research resources, including websites, atlases, interviews, and periodicals, as well as art, literature, and science resources, in addition to textbooks. In Middle School, group projects and individual presentations help to create an experiential, hands-on approach to doing research and presenting findings. Basic study skills are taught and reviewed at every level.

World Studies 6: The Ancient Regional World

This course looks at the development of regional river valley civilizations. Students will gain an understanding of the evolution of cultures and societies around the globe, beginning their journey in the Middle East. Students will learn about the development of agriculture and the first civilizations in Mesopotamia, Egypt, India, China, Greece, Rome, and the Americas. Students will take the role of historical investigator in order to ask critical questions and solve problems. Study skills focus on organization, note taking, analytical thinking skills, and research. Course work will include formative and summative assessments, including individual and group projects, presentations, informal and formal written responses, quizzes, and unit assessments.

World Studies 7: The Early Global World

Seventh graders focus their studies on the continuing development of civilizations, with a deepening appreciation of economic, religious, and cultural exchange preceding the development of a global economy. Areas of focus include the expansion of African kingdoms and the rise of Muslim states, the Middle Ages in Europe, the Crusades, Renaissance, Reformation, Exploration, and Colonization. Class discussions, projects, presentations, and collaborative work are central to class success.

World Studies 8: Georgia History and US Government

This course provides students with an opportunity to examine local and national history. Students will first study how the geography and natural resources of Georgia impacted its historical development and will then examine Georgia government. The second semester will focus on American government.

UPPER SCHOOL WORLD STUDIES

In Upper School world studies, research and writing tasks become more complex. The chronological study of world history continues through contemporary times in the tenth grade. Specialized topics begin with United States history in the eleventh grade and continue with electives in the twelfth grade.

World Studies 9: Revolutions Reshape the World
This course investigates events in world history from 1550-1850. Students will investigate the major revolutionary changes that took place in Europe and the Americas. Girls will define revolution and determine how the revolution of ideas had major political and social impacts. Students will analyze why scientists and thinkers questioned old ideas and revolutionized the arts, religion, society, and government. Furthermore, they will investigate the economic, social, and political reforms that arose from the Industrial Revolution. Throughout the year, we will analyze how revolutions have been critical and fundamental in the development of the modern world. Specific topics of study include the Rise of Absolute Monarchs, The Enlightenment, American Revolution, French Revolution, Spread of Revolutions in Europe, Latin American Independence Movements, The Early Industrial Revolution, and Revolution in the Arts.

World Studies 10: Understanding the 20th Century and Today
This course is the culmination of many years of chronological and global study in world studies. Students will explore the impacts of the Industrial Revolution, nationalism, the rebirth of European imperialism, World War I, the rise of communism and totalitarianism, World War II, the Cold War, the post-Cold War world and 21st century. Special emphasis will be placed on understanding the challenge of democracy in 20th and 21st centuries.

World Studies 11: United States History
This survey course examines the political, social, cultural, economic, and religious history of the United States. It begins with an examination of Native American cultures in the Americas prior to European colonization. As the course progresses, students study the American Revolution, the creation of a Federal government, the rise of the Republic, the American Civil War, Reconstruction, immigration, World War I, the Great Depression, World War II, the Cold War era, the Civil Rights and Women's Rights movements, the Vietnam War, and the cultural landscape of the eighties and nineties. Via weekly Harkness discussions, students examine the plurality and diversity of experiences as they develop an understanding of themes within American studies.

World Studies 11: AP United States History
Like the United States history course, AP US History examines the political, social, cultural, economic, and religious history of the United States. Daily lectures emphasize the broad themes connecting trends in American history over time. The course involves extensive reading and requires student initiative to master content not covered in class. Homework, tests, and bi-weekly writing assignments are modeled upon the format of AP assessments.
Prerequisites: AP US History requires completion of World Studies 10 with a grade of at least 90 and teacher's recommendation.

WORLD STUDIES ELECTIVES
Beginning in the sophomore year, students may choose from a series of elective classes. Offerings may include courses in cultural history, government, and other social sciences; offerings will vary depending on student interest and faculty availability.

World Religions
World Religions investigates the similarities and differences between many of the world's religious traditions. Students will learn about the cultural, social, and historical contexts out of which developed the religions of the Native Americans, Africans, Hindus, Buddhists, Jews, Christians, and Muslims. Students will explore how and why Buddhism, Jainism, and Sikhism evolved from Hinduism, and discuss the indigenous Chinese traditions of Taoism and Confucianism, Judaism, Christianity, and Islam. The goal of this elective is to provide students with a working knowledge of the world's most prevalent religious traditions.
Prerequisites: Open to all seniors. Juniors may request this course with their World Studies teacher's recommendation.

AP Human Geography
The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. The curriculum reflects the goals of the National Geography Standards. *Prerequisites: Students must have completed US History, completed WS 10 with at least a 90%, or concurrently enroll in WS 10. A teacher's recommendation is required for all rising 10th and 11th graders.*

Economics and Entrepreneurship
Students in this course combine the fundamentals of microeconomics (e.g., demand, supply, pricing, production, incentives, etc.) with business planning and development. The culmination of the course is creating and presenting a business plan, with an award for the most creative and feasible plan. Students also study macroeconomic concepts (e.g., economic measurement, financial markets, the Federal Reserve System, trade, and globalization). Students participate in hands-on experiences, reading and discussion, role-play, simulations, lecture, and demonstrations. In addition, they benefit from the mentorship of women in business and guest speakers. This course is considered a social science for the purpose of college admissions.
Prerequisite: Algebra II

World Languages Department

MIDDLE SCHOOL LANGUAGES

The Middle School program allows all 7th and 8th grade students to engage actively in the study of French or Spanish. Through an immersive approach, students will learn the basics of communication with a focus on both vocabulary and grammatical understanding. As they explore the use of each language around the world, students will develop an appreciation for the rich variety of culture and history that the study of another language allows. In so doing, students will gain an appreciation for their own place in the world and a stronger sense of themselves as global citizens. Middle School language classes are project based and will explore topics deeply and with an emphasis on connecting their learning across the curriculum.

UPPER SCHOOL LANGUAGES

The Upper School language program allows students to develop linguistic and cultural competence in French or Spanish. Through an immersive approach, students engage in a rigorous course of study that aims to develop their skills speaking, reading, writing, and hearing the language. Upper School students are required to complete three levels of the same language, and this course of study will leave the student with a rich vocabulary, grammatical understanding, and cultural appreciation. Exploring literature, cultural realia, and historical documents in the language allows students to deepen their appreciation for and understanding of the language while making connections across the curriculum, and students are encouraged to take their language learning outside the classroom through local cultural explorations, global travel, and internships. All students entering the Upper School language classroom will take a placement exam to best determine their starting point of study.

French 7

Seventh grade students will begin their exploration of French in an immersive environment that supports their needs as Middle School learners. Students will explore elements of grammar and vocabulary as they begin to discover the francophone world and the unique cultures and traditions associated with the many countries that use the French language. By adopting French names and exploring personal stories in French, students make connections to a world language and culture distinct in most cases from their own. Greetings, expressions of emotion, telling simple stories, and describing physical and personality traits about themselves and their family are part of daily communication. Study skills necessary for success in the acquisition of a second language will be built into the course work at this level. *Open to all 7th grade students*

French I

In French I, students build a basic vocabulary. By adopting French names and exploring personal stories in French, students make connections to a world language and culture distinct in most cases from their own. Greetings, expressions of emotion, telling simple stories, and describing physical and personality traits about themselves and their family are part of daily communication. This course focuses on learning basic grammatical structures that are necessary to communicate effectively, including forming yes or no questions from statements in French. Students also learn about French speaking countries, world travel, and customs abroad. Level I students are able to speak in the present and near future. By the year-end, students are making

distinctions about grammatical and phonetic nuances of the language and using the French language to express themselves personally. *Open to students in the eighth grade or above with no previous experience in the language*

French II
In French II, students build on the skills they developed in French I. Speaking and auditory skills are emphasized, with additional focus on reading French texts appropriate to this level. Culture is explored through a complete immersion in the language, class discussion, and the exploration of other resources such as the Internet and literary resources. Students will begin their exploration of French literature with works such as *Un été pas comme les autres.* Increasing complexity of grammatical concepts at this level, such as the passé composé and imperfect verb tenses, allow students to communicate in a sophisticated way in a variety of different situations. *Prerequisite: French I or French 7 and 8 with a placement test*

French III
In French III, students continue to develop their listening, reading, writing, and speaking skills within the context of an immersion-style classroom. They continue to practice speaking everyday French and work to strengthen their fluency and ease of understanding. Students begin to deepen and extend their existing knowledge of the structure of the French language as they review some of the more complicated nuances of the language. As students learn new vocabulary via thematic units, they practice applying their existing understanding of the language with the chance to relearn topics that may not have been sufficiently mastered in French I and II. A particular emphasis is placed on verb tenses. Students are introduced to the future tense and the conditional mood, which allows them to specifically express hypothetical situations using tenses learned already. The subjunctive mood of verbs is also introduced at this level. This year, an additional emphasis is placed on developing solid reading and composition skills. Students apply their understanding of the language as they begin to read and discuss French poetry and prose, such as *Le petit prince*. *Prerequisite: French II*

French IV
French IV students deepen their study of French language and the literature, history, and culture of francophone countries. In this course, students begin to apply their own personal interests to their study of French. French IV will include chapters that focus on a variety of themes and the analysis of excerpts of French and francophone literature and poetry. While studying these topics, students continue to strengthen their mastery of the structure of the French language, as well as refine their speaking, listening, reading, and writing skills. Instruction will continue to focus on vocabulary acquisition in an immersion-style classroom. Review and strengthening of grammatical concepts also continues in this context. In addition, students will complete individual research projects that will help them develop the independent study skills essential to success in a university setting. *Prerequisite: French III.*

Advanced French Language and Culture
In this course students will explore various cultural elements of the French-speaking world. They will explore both the little and big C's of culture (language, art, food, music, joie de vivre, film, religion, ethnic diversity, history, celebrations, and traditions). Students will use their understanding of French grammar and language to read a variety of printed resources, view

French web and media outlets from around the world, and engage in discussions and written reflections in French. *Prerequisite: French III or higher*

AP French Language
The AP French Language and Culture class focuses on French for active communication, concentrating on presentational, interpersonal, and interpretive modes of communication. The course emphasizes interpersonal and presentational oral interactions and written compositions. Students will read and discuss authentic written texts, such as newspaper and magazine articles, as well as literary texts. Additionally, students will practice listening comprehension of authentic materials such as films, television, and radio from francophone countries. The French Language and Culture exam focuses on the mastery of six course themes: Global Challenges, Science and technology, Contemporary Life, Personal and Public Identities, Families and Communities, and Beauty and Aesthetics. Additionally, the course will allow students to make comparisons between and within languages and cultures. As such, significant emphasis is placed on the understanding of modern French and francophone culture. Most importantly, the course will prepare students to use the French language in real-life settings. Students who enroll in this course are expected to take the College Board AP examination in May. *Prerequisite: AP French Language and Culture requires a grade of B+ or higher in French IV and a teacher's recommendation*

Spanish 7
Seventh grade students will begin their exploration of Spanish in an immersive environment that supports their needs as Middle School learners. Students will explore elements of grammar and vocabulary as they begin to discover the Hispanic world and the unique cultures and traditions associated with the many countries that use the Spanish language. By adopting Spanish names and exploring personal stories in Spanish, students make connections to a world language and culture distinct in most cases from their own. Greetings, expressions of emotion, telling simple stories, and describing physical and personality traits about themselves and their family are part of daily communication. Study skills necessary for success in the acquisition of a second language will be built into the course work at this level. *Open to all 7th grade students*

Spanish I
In this course, students are introduced to the basic grammatical structures necessary to communicate at the beginning level. They learn daily greetings and simple questions and participate in projects, dialogues, and cultural activities. The class, conducted predominantly in Spanish, focuses on basic grammatical structures to communicate effectively. Students incorporate what they know into class conversations. Students learn about Spanish speaking countries, travel, and customs. By yearend, students make distinctions about grammatical and phonetic nuances of the language and use Spanish to express themselves.

Open to students in the eighth grade or above with no previous experience in the language

Spanish II
In second-year Spanish, students build on the skills they developed in Spanish I. Speaking and auditory skills are emphasized, with additional focus on reading Spanish texts appropriate to this level. Class discussions and grammar explanations are conducted in the target language. The increasing complexity of grammatical concepts at this level, such as conditional and subjunctive

verb tenses, allow students to communicate in a sophisticated way in a variety of different situations. Culture is explored through a complete immersion in the language, class discussion, and the exploration of other resources such as the Internet and literary resources. *Prerequisite: Spanish I or Spanish 7 and 8 with a placement test*

Spanish III
In Spanish III, students continue to develop their listening, reading, writing, and speaking skills within the context of an immersion-style classroom. They continue to practice speaking everyday Spanish and work to strengthen their fluency and ease of understanding. Students begin to deepen and extend their existing knowledge of the structure of the Spanish language as they review some of the more complicated nuances of the language. Additionally, the students receive an introduction to the field of literature. *Prerequisite: Spanish II*

Spanish IV
Spanish IV is designed for those students who wish to continue their study of Spanish language and the literature, history, and culture of Spanish countries. In this course, students begin to apply their own personal interests to their study of Spanish. Spanish IV will include chapters that focus on a variety of themes relates to the real life. While studying these topics, students continue to strengthen their mastery of the structure of the Spanish language and refine their speaking, listening, reading, and writing skills. Instruction will continue to focus on vocabulary acquisition in an immersion-style classroom. Review and strengthening of grammatical concepts also continues in this context. In addition, students will complete individual research projects that will help them develop the independent study skills essential to success in a university setting. *Prerequisite: Spanish III*

Advanced Spanish Language and Culture
In this course, students will explore various cultural elements of the Spanish speaking countries. We will explore both the little and big C's of culture (language, art, food, music, films, religion, ethnic diversity, history, celebrations, and traditions). Students will use their understanding of Spanish grammar and language to read a variety of printed resources, to view Spanish web and media outlets from around the world, and to engage in discussions and written reflections in Spanish. *Prerequisite: Spanish IV*

AP Spanish Language
This course focuses on Spanish for active communication, concentrating on presentational, interpersonal, and interpretive modes of communication. The course emphasizes interpersonal and presentational oral interactions and written compositions. Students will read and discuss authentic written texts, such as newspaper and magazine articles, as well as literary texts. Students will also intensively practice the four components of the language in their AP textbook: listening, reading, writing, and speaking. Students who enroll in this course are expected to take the College Board AP examination in May. *Prerequisites: AP Spanish language requires a grade of B+ or higher average in Spanish IV and a teacher's recommendation.*

Science Department

MIDDLE SCHOOL SCIENCE

Middle School science is an exploration of science through guided inquiry. Each girl will grow in knowledge and confidence. Students learn to analyze unfamiliar situations, collect data, consider alternatives, and decide on a course of action. In this way, all girls learn to rely on their own initiative and develop an active interest in spatial reasoning, design, and problem-solving processes. In the Middle School sequence, there is a balance between environmental, life and physical science, along with descriptive and quantitative skill building.

Science 6: Earth Science & STEAM Foundations

In sixth grade, students cultivate a life-long love of science and design through exploration. During one semester of 6th grade science, girls will explore the most critical components of earth science: water cycle; relationships between the earth, moon, and sun; seasons; plate tectonic theory; and geologic rock formation in guided iterations through the scientific method. Students will be immersed in systems thinking and growing in their ability to write methods to carry out their independent investigations. During the other semester of 6th grade science, girls will build a foundation of logical reasoning, design, and coding to position themselves for high quality authentic design during their time at AGS. Students will learn to use technology as creative tool in the STEAM Foundations portion of the course.

Science 7: Life Science

Seventh grade begins with an exploration of ecology and ecosystem-scale questions to understand interactions between the environmental and organisms. Next, students explore the basic structure and function of living organisms, including themselves. Girls continue to develop their computer programming and logical reasoning skill set by creating their own organelle guessing game in SCRATCH to reinforce their knowledge of living organisms. Life Science emphasizes the myriad of connections between the classroom and the outside world, aided by AGS's organic garden and outdoor classroom. Students learn the importance of the scientific method during extensive inquiry driven laboratory experiences interwoven with instruction. Critical skill building (observing, inferring, predicting, classifying, communicating, measuring, calculating, creating data tables, and graphing) occurs in Life Science as scientists grow to organize, analyze, and interpret their own data.

Science 8: Physical Science

Physical Science is an exploration of energy and matter. From the smallest components of our world to the largest nuclear event, physical science is the cross-section of chemistry and physics. In eighth grade, students continue to build foundational understanding in the sciences. Experimentation and formal lab report writing prepare students for rigorous Upper School science as proficient and objective explorers of the natural world. Math and communication skills are emphasized in eighth grade, as students are asked to demonstrate understanding of qualitative and quantitative data through discussion, presentations, and written assignments.

UPPER SCHOOL SCIENCE

In Upper School science, students gain a deeper knowledge of modern scientific principles and methods as well as an appreciation for the significance of science in contemporary society. Emphasis is on scientific inquiry and experimental design. To fulfill the laboratory science graduation requirement, all students must take biology, chemistry, and physics. Elective courses in Computer Science and Engineering/Design provide opportunities for students to cultivate skills in logic, modeling, 3-D spatial reasoning, and problem solving. Students who have demonstrated exceptional ability in the complement of basic courses may qualify for advanced placement courses in biology, chemistry, physics, or environmental science. We encourage all girls to take at least four science courses during Upper School.

Conceptual Biology

Biology is the study of the living world. The theme of evolution unifies the course as we seek to answer the questions: What are the origins of biological diversity? What lives where and why? What keeps me alive? Students will evaluate and discuss the structure and function of animal and plant systems, microscopic study of cell structure, cell metabolism, genetics, and gene expression. Concepts will be explored through observation, testing hypotheses in the laboratory, reading, and classroom discussion. Students will refine data gathering and analysis skills, develop metacognitive strategies, and refine scientific writing skills. *Prerequisites: Algebra I*

Biology Methods H

Biology Methods requires greater depth of thought as students explore the structure and function of animal and plant systems, microscopic study of cell structure, cell metabolism, genetics, and gene expression. This course will demand more rigorous quantitative analysis, more independent experimental design, and greater emphasis on application and synthesis of scientific principles. The curriculum for this course is designed for students with a strong affinity for science and will prepare students for AP Biology. *Prerequisites: Average grade of B+ in Algebra I or A+ in Algebra and a science teacher's recommendation*

Conceptual Chemistry

Chemistry is an introduction to the submicroscopic natural world. Course content includes: states of matter and energy; elements and the Periodic Table; atomic structure; chemical bonding; equations, reactions and stoichiometry; concentration and solutions; behavior of ideal gases; and acids and bases. Classes consist of lecture, discussion, problem solving, and laboratory work. Students strengthen measurement and experimental technique in regular student driven laboratory investigations. Emphasis shifts from qualitative observational data gathering first semester to quantitative experimental techniques and data analysis second semester. Students graph and analyze their own data as they build critical thinking and scientific writing skills. *Prerequisites: Algebra I and Geometry*

Chemistry Methods H

Chemistry Methods H requires greater depth of thought as students explore states of matter and energy, elements and the Periodic Table, atomic structure, chemical bonding, equations, reactions and stoichiometry, concentration and solutions, behavior of ideal gases, and acids and bases. This course will be enhanced by rigorous quantitative analysis, more independent experimental design, and greater emphasis on application and synthesis of scientific principles.

The curriculum for this course is designed for students with a strong affinity for science and will prepare students for AP Chemistry. *Prerequisites: Average grade of B+ or higher in Honors Geometry, concurrent enrollment in Honors Algebra II, and a science teacher's recommendation*

Conceptual Physics
Physics deals with matter, energy, and the interaction of the two. Physics will cover a survey of content usually covered in a year long college physics course, including mechanics, energy, gravity, sound, light, and electric circuits. The intent of the class is to both develop the student's mastery of physics principles and to emphasize the relationship and utility of these principles in other fields. The creative application and extension of the student's knowledge will be especially encouraged through discussions, projects, labs, and assignments. All concepts in physics are explored with less emphasis upon complex mathematics than that required in the Honors Physics course. *Prerequisite: Geometry*

Computer Science Principles
Computer Science Principles explores software design and development, algorithmic thinking, the impact of computer science on society and a foundational understanding of the Internet. Students will learn the fundamentals of software development including programming languages and game design. Students will complete projects using SCRATCH and PYTHON programming languages. Students will address problems both logically and algorithmically, understanding not only notions of flow of control in a programmatic solution but also how to systematically break down a problem and then compose an algorithmic solution. This course counts as a 4th science for Georgia schools and scholarships. *Prerequisites: Algebra I*

Engineering and Design
Engineering and Design explores the process of design and will give students the opportunity to apply what they have learned in math and science to solve real-world problems. Students will learn the fundamentals of the design process, and reinforce skills in research, analysis, collaboration and communication. Students will engage in activity- project- and problem-based learning that will utilize robotics, 3-D printing and design, and hands-on making. This project-based course will demand that students draw from coursework in Science, Humanities and Mathematics as well as from their life experience, pushing themselves to solve problems with empathy and creativity. This course will culminate in a student driven independent design project. This course does not count as a 4th science for Georgia schools and scholarships. *Prerequisites: Algebra I*

AP Biology
In AP Biology students take an in-depth look at molecules and cells, heredity, organism structure and function, and ecology through the lens of evolutionary theory. As they apply new knowledge to environmental, medical and social concerns, students explore scientific solutions to 21st century problems. Questions are addressed through laboratory investigations, self-designed experiments, research projects, evaluated discussions, and outside reading assignments. There is extensive reading and collaborative analytical work outside of class, including experimental work. As with all AP level courses, students are expected to exhibit independent thought and initiative. This course counts as a 4th science for Georgia schools and scholarships.

AP Biology Prerequisites: Average grade of B+ or higher in Honors Chemistry and Biology, completion of Algebra II, and a science teacher's recommendation

AP Chemistry

AP Chemistry is a continuation of Honors Chemistry. This course emphasizes the mathematical and theoretical aspects of inorganic and organic chemistry at the college freshman level. Topics such as the structure of matter, kinetic theory of gases, chemical reactions and equilibrium, chemical kinetics, and thermodynamics are explored deeply through the use of self-designed laboratory investigations, written assessments, and evaluated discussions. There is extensive reading and collaborative analytical work outside of class, including experimental work. As with all AP level courses, students are expected to exhibit independent thought and initiative. This course prepares students for the AP exam in May. This course counts as a 4th science for Georgia schools and scholarships. *Prerequisites: Completion of a biological science, Honors Chemistry, and Algebra II with a grade of A- or higher and a science teacher's recommendation*

AP Environmental Science

In AP Environmental Science students ask questions and investigate creative solutions to the environmental challenges of the coming decades. Can we ethically curb human population growth? How does our lifestyle in Atlanta affect life in the Gulf of Mexico? What does climate change mean for me? AP Environmental Science is an excellent choice for students who are curious and passionate about their world, ask questions that challenge the status quo, and want to draw on science, psychology, and world studies to find solutions to the environmental problems we face today. This course counts as a 4th science for Georgia schools and scholarships. *Prerequisites: Completion of biology and Chemistry with a grade of B or higher, and a science teacher's recommendation*

AP Physics 1

AP Physics 1 is equivalent to a first semester college course in algebra-based physics and provides a systematic introduction to Newtonian mechanics; work, energy, and power; mechanical waves and sound; and electric circuits. Covering this content during the span of a full year allows for deep conceptual understanding, inquiry based instruction, and the development of high degree of mathematical rigor in problem solving. Students sharpen their problem-solving ability and apply qualitative and quantitative reasoning to inquiry driven experimental investigations. As with all AP courses, students are expected to exhibit independent thought and initiative. This course counts as a 4th science for Georgia schools and scholarships. *Prerequisites: Average grade of A- or higher in Honors geometry, completion of Honors Chemistry and a science teacher's recommendation*

Fine Arts Department

The AGS Fine Arts curriculum provides the opportunity for students to fearlessly express their individual creativity through the visual and performing arts in a safe and supportive environment. This curriculum immerses students in the scholarly inquiry of the history, theory, techniques, and styles of artistic expression. The performing and visual arts courses offer a variety of experiences in which students engage in creative problem solving, critical thinking, and developing technical, observational, and analytical skills. All AGS students participate in the arts. Our courses are designed to mold intelligent, motivated, and passionate artists.

MIDDLE SCHOOL FINE ARTS

The Middle School performing and visual arts curriculum is designed to expose students to a wide selection of artistic media and methods of expression, foster a deeper understanding and appreciation for the world of fine art, and provide students with a strong foundation of technical skill.

Performing Arts 6

Performing Arts 6 is a semester-long introductory class combining music and theater. In music, students will study the fundamentals, including pitch, rhythm, and harmony. The repertoire will be drawn from a variety of sources including show tunes, seasonal literature, classical selections, and spirituals. In theater, students will become confident in using their bodies, voices, and minds as they are introduced to improvisation, interpretation, and scene work. A focus on playwrights and vocabulary will train the students to be more than just performers.

Middle School Theatrical Arts

Students learn the basics of building a character through such activities as pantomime, improvisation, and effective speaking using enunciation, projection, and breathing. Students also learn the importance of technical elements such as costumes, props, and scenery. Students will create original work and serve in various roles on a production (director, actor, writer).

Middle School Chorus

Students will learn the basics of singing in a choral ensemble, music history, and music theory. They will study the foundations of proper vocal technique, breath control, intonation, posture, balance, and blend. Students will be given an introduction to the chronology of the musical eras, musical genres (pop, rock, jazz, Broadway, and classical), and famous composers. Students will understand and apply beginner's knowledge of music notation, harmonic structure, form, intervallic relationships, and sight-reading using Solfeggio. This is a performance-based class using repertoire and method studies.

Production Design

In this course, students will be responsible for crafting the "world" of each AGS theatrical production. Designing, building, and painting come together through four theatrical elements: sets, props, costumes/makeup, and lights. Students will collaborate with each other and a director to envision, design, and create the look and feel of each element of a

stage production. The ideas and visions of the class will be developed and communicated through sketches, refined as scale white models, and then finally brought to life. This class is open to eighth-twelfth grade students.

Visual Art 6
In this one-semester course, students gain an overview of the seven elements and seven principles of design, providing a foundation upon which they can build in future art courses. Students will concentrate on making two-dimensional art using a variety of media, learn about art criticism and art history, and keep a sketchbook. Media explored may include charcoal, graphite, pen and ink, oil pastel, and digital media. The course provides an introduction to observation-based learning, with an emphasis on translating three-dimensional objects into believable two-dimensional renderings. Sketchbook assignments provide opportunities to explore new techniques and media and to refine layouts for projects.

2D Foundations
This course provides students with a comprehensive understanding of the elements and principles of design as they apply to two-dimensional media. Through a wide variety of two-dimensional approaches such as paper cutting, pen and ink, collage, and paint, students learn to effectively communicate ideas and to analyze, interpret, and evaluate their own work as well as the efforts of others. Students learn about a variety of cultures, influential artists and art movements, keep a sketchbook, and develop verbal and written art criticism skills. This class is open to seventh and eighth graders who have not previously completed it.

3D Foundations
In this course, students are provided with a comprehensive understanding of the elements and principles of design as they apply to three-dimensional media. Through a wide variety of three-dimensional media such as clay, wood, and plaster, students learn to effectively communicate ideas and to analyze, interpret, and evaluate their own work as well as the efforts of others. Students learn about a variety of cultures, influential artists and art movements, keep a sketchbook, and develop verbal and written art criticism skills. This class is open to seventh and eighth graders who have not previously completed it.

UPPER SCHOOL FINE ARTS
The Upper School performing and visual arts curriculum builds upon the foundational experiences and knowledge gained in the Middle School fine arts program. This curriculum allows students to more deeply explore particular mediums and methods of expression as they encounter more conceptually challenging coursework.

Literary Arts: Creative Writing
In this course, students will build a foundation in creative written expression, with instruction in poetry, short fiction, long-form fiction, and script writing. In addition to creating work, students will benefit from intensive study of editing techniques to refine their work and hone their skills in creative expression. Students learn how to give and utilize constructive feedback in the course's workshops, as well as in support of the *Nonanon* Literary Magazine. The class will oversee all aspects of *Nonanon*'s creation, including choosing a theme, selecting and creating pieces for inclusion, and designing a layout for print

and online editions. At the end of the course, each student will have created a portfolio of creative work. *Prerequisite: A 9th grade student who wishes to take Literary Arts must have a recommendation from her 8th grade English teacher and must provide evidence of additional creative writing pursued (NaNoWriMo project, submissions to the Literary Magazine, etc.). Teacher recommendation required.*

Intermediate Theatrical Arts
In Intermediate Theatrical Arts, the fall semester focuses on developing theater literacy: understanding the genres of theater, exploring theater history and its social and political context, and developing critical and analytical writing skills. Through the in-depth study of one classic play, students will research the production and engage in putting together a full production. In the fall semester, students will begin compositions of their own monologues and scenes, which will then be performed by classmates in the spring. This class is open to ninth and tenth graders. *Prerequisites: MS Theatrical Arts and teacher recommendation*

Advanced Theatrical Arts
In Advanced Theatrical Arts, the fall semester focuses on developing theater literacy: understanding the genres of theater, exploring theater history and its social and political context, and developing critical and analytical writing skills. Through the in-depth study of one classic play, students will research the work and engage in putting together a full production. In the fall semester, students begin compositions of their own monologues and scenes, which will then be performed by classmates in the spring. *Prerequisites: Intermediate Theatrical Arts and teacher recommendation*

Directing
Directing a production entails more than just a good eye for details. This course will teach the basics of the craft of directing, including text analysis, characterization, casting, blocking, rehearsal, and performance. The emphasis will be on the relationship between the actor, text, designers, and director. Students may also learn how to apply lessons of society, history, and current events into the text at hand. *Prerequisites: Advanced Theatrical Arts and teacher recommendation*

Resume and Audition Prep
Preparing for an audition or college interview can frighten anyone. The key to success is to be ready for anything. The fall semester focuses on developing theater literacy: understanding the genres of theater, exploring theater history and its social and political context, and developing critical and analytical writing skills. Through the in-depth study of one classic play, students will research the production, and they will engage in the practical training of putting together a full production. In the spring semester, students will expand their knowledge through theatrical design and collaborate on a production. This class is open to eleventh and twelfth graders.

Hurricane Choir
Hurricane Choir is an audition-based ensemble. This is a yearlong, advanced performance opportunity offered to experienced music students who are accomplished in vocal performance. Students will continue to develop vocal technique and musicianship as well as develop critical thinking skills through the analysis of musical elements, including form and

text. Students are expected to participate in one evening concert each semester as a major part of their grade as well as a few other performance opportunities that arise throughout the year. The course will provide advanced vocal instruction on music grade 4-6 (Music grade level is ranked M, 1-6 with 6 representing college grade music). Building on the foundational knowledge gained in US Chorus, this course will allow the time and individualized attention necessary for students to dive deeper into the study of music history, theory, and composer intent. This ensemble will allow the students to increase their social skills like responsibility, leadership, empathy, and collaborative teamwork.

Upper School Chorus
This is a performance-based class, using repertoire to build upon foundational skills. Students will develop and foster intermediate/advanced vocal techniques while singing SSA to SSAA mixed pieces accompanied and a cappella. Students will engage in critical analysis of performances, historical pieces, and self-study. Students will demonstrate and apply intermediate understanding of music theory by sight-reading, harmonic dictation, and aural skills.

Production Design
In this course, students will be responsible for crafting the "world" of each AGS theatrical production. Designing, building, and painting come together through four theatrical elements: sets, props, costumes/makeup, and lights. Students will collaborate with each other and a director to envision, design, and create the look and feel of each element of a stage production. The ideas and visions of the class will be developed and communicated through sketches, refined as scale white models, and then finally brought to life. This class is open to eighth-twelfth grade students.

2D Composition and Media
This course is an in-depth study of both compositional design and color theory. It provides students with an active knowledge of two-dimensional vocabulary and practices, introducing students to a variety of 2D media through a broad range of hands-on assignments. Critiques will be an integral part of the studio environment, and the course will include on-going consideration of art history and criticism. This course prepares students for higher-level courses that deal explicitly with composition and design such as photography.

Drawing: Mark Making and Meaning
This course is an investigation of the broad range of drawing media and processes utilized in historical and contemporary drawing. Students will be exposed to drawing techniques including contour, gesture, and linear perspective through a variety of subject matter such as still life, figure drawing, and portraiture. Students will practice and hone technical drawing and compositional skills that will allow them to portray subject matter both representationally and abstractly. Students will engage in an ongoing exploration of "the drawing process as subject matter," experimenting with methods of conveying and capturing meaning through the act of making marks on paper. *Prerequisite: 2D Composition and Media*

Painting: Materials and Techniques
This course introduces students to a variety of painting media including acrylic, watercolor, ink, and oil based pigments. Students learn correct application methods and experiment with

a range of painting surfaces. Painting exercises will focus on observation-based learning, with an emphasis on translating three-dimensional objects into believable two-dimensional renderings. Emphasis will be on understanding and creating tonal values through application of color theory principles to paint usage. *Prerequisite: Drawing: Mark Making and Meaning*

Graphic Design
In this course students gain an understanding of the power of graphic design as a visual communication vehicle both historically and in the contemporary world. Design principles, typography, page layout, and color usage are taught as tools to express message and content. Emphasis is placed upon concept development, establishing a hierarchy of information and creating visual systems. Students learn to use Adobe Creative Suite programs and specialized equipment including graphics tablets, large-format scanner, and printer to create original projects. *Prerequisite: 2D Composition and Media*

Photography
This course provides students with an introduction to the basic techniques of working in 35mm black and white film. Students will gain a working understanding of the Single Lens Reflex camera and how to utilize depth of field, aperture, and film speed to capture images with a rich tonal value scale. Students will learn how to efficiently and safely develop film and print images in a wet darkroom. Throughout the course, emphasis will be placed on students using a viewfinder to refine their image composition skills as they learn to see "photographically." *Prerequisites: Students must provide their own 35mm camera and pay a $100 materials fee. To enroll in this class students must have completed 2D Composition and Media.*

Ceramics: Hand-Building
This course is an in-depth exploration of three-dimensional ceramic form. Students will gain proficiency in several hand-building techniques: slab, pinch, coil, and slump molding. Students will learn to conceptualize three-dimensional forms using sketches in both pencil and clay and how to accurately translate those ideas into form. Through the creation of their own work, students will also explore, analyze, and discuss the interrelationship of surface treatment to the form of a ceramic piece. Throughout the duration of the course, students will investigate historical and contemporary ceramic artists and movements as they apply to current projects.

Ceramics: Wheel Throwing
This course is an in-depth exploration of the wheel as a tool for generating three-dimensional forms. Students will gain proficiency in basic wheel-throwing techniques and tools. Through the creation of both functional and sculptural ceramic wares, students will explore, analyze, and discuss the interrelationship of surface treatment to the form of a ceramic piece. Throughout the duration of the course, students will investigate historical and contemporary ceramic artists and movements as they apply to current projects. *Prerequisite: Ceramics: Hand-Building*

Portfolio
This course is designed for students who are considering pursuit of the visual arts in college or are serious about pushing their technical and conceptual skills. Through teacher-led

exercises and student directed inquiry, participants engage in rigorous concept development and refinement. Students are guided in the incorporation of research into their individual artistic process with an emphasis placed on effectively documenting their process. Work produced is evaluated based upon demonstration of technical proficiency and its conceptual cohesiveness. The course provides students the necessary support and consultation to effectively design and build a diverse portfolio for application to student-targeted, undergraduate fine arts schools and/or programs. *Prerequisites: Teacher recommendation*

Physical Education Department

Physical Education 6-8

Physical Education is based on the national standards for physical education developed by the National Association of Sports and Physical Education. The program provides opportunities to try new skills and introduces steps that lead to living a healthy lifestyle. Heart rate monitors are used so that students learn not only how the body responds to exercise, but also the intensity at which they should be exercising. During PE, students will experience enjoyment, challenge, self-expression, and social interaction. A physically educated student demonstrates competency in a variety of movement forms, with equal emphasis on fitness and sports skills. Each student is expected to show respect and participate as an active learner and to develop their communication, teamwork, listening, and leadership skills through cooperative games and activities. Students will learn strategies for team play as they progress through the fundamental skills in a variety of sports.

Middle School students also take part in a wellness curriculum that strives to develop resilient, well-balanced, self-aware young women by promoting physical and psychological health. The Middle School curriculum includes exposure to different methods of fitness, nutrition and balanced diets, and substance abuse prevention. Students learn effective conflict resolution strategies, stress management skills, and beginning meditation practice.

PE and Wellness 9

Students will experience a variety of activities in the ninth grade year. They will participate in some traditional PE activities, as well as be introduced to lifetime wellness activities. In ninth grade, they will be introduced to resistance training, where they will learn the beginning concepts of life fitness and wellness. They will learn about exercise for weight control, health problems related to inadequate fitness levels, personal exercise programs, fitness fads and fallacies, as well as participate in individual, team, and lifetime sports. A nutrition unit will also be included. The final objective of this course is for each student to have a positive attitude toward physical self and lifelong physical activity. One emphasis in this course is adolescent resistance (strength) training, with safety being the top priority. For this reason, an emphasis will be placed on proper exercise and lifting techniques. Additionally, the resistance training programs will be based on the latest research governing adolescent strength training. One day a week, the girls will be in the classroom for wellness talks. The wellness curriculum has a strong focus on resiliency skills and teaches girls to manage emotions, think positively, resolve conflict, manage stress, and effectively set goals. The curriculum also promotes physical wellness, including topics such as healthy sleeping habits, meditation practice, balanced diets and nutrition, substance abuse prevention, and sexual health.

Conditioning

This course is for those seeking a high level of physical challenge and fitness improvement. The major objective of the course is adolescent resistance (strength) training, with safety as its top priority. Students will learn concepts such as threshold of training, cardiovascular fitness, muscular strength, muscular endurance, and flexibility. This class uses Crossfit style training and is taught by a Crossfit Level 1 trainer who will emphasize proper form and lifting techniques. The girls will be introduced to a variety of exercises, including Olympic lifts such as the back squat, power clean, and clean and jerk.

They will also be exposed to kettlebells, slam balls, and plyo boxes, which may be used during that day's WOD (workout of the day). *Prerequisites: This class is open by permission of the instructor to students in grades 10-12.*

Get Moving! Aerobic Exercise

We all know our bodies are made to move, but too often we find ourselves sitting. This class is offered to those who are looking to add movement and exercise to their day. Activities could include walking, hiking, running, yoga, dance, and stretching. Activities may take the class off campus to explore local trails and streets.

Other Curricular Elements

INDEPENDENT STUDY
AGS offers students the opportunity to engage in academic enrichment through research and self-guided study by working with a faculty sponsor in an independent study course. This course does not take the place of required academic courses but serves as an opportunity to go deeper in a particular area of interest and can fulfill an elective requirement. Students are required to collaborate with a sponsoring faculty member, submit a proposal to the curriculum team the spring of the year before the independent study, and present their topic before the curriculum team in advance. Students and teachers are notified before the summer to communicate the approval status so that they may appropriately prepare for their independent study coursework the following year.

JOINT ENROLLMENT
Some of our most advanced students will be ready for the challenge of a college class in their junior or senior year. Students and their families may pursue dual enrollment, and AGS will support a student in specific core subject areas where the needs of a student cannot be met at AGS. To do this, a student must have the schedule and transportation flexibility to travel to a college campus and take a course after school hours. Students work through the Academic Dean's office to assure that they are making satisfactory progress in the college-based class and to receive additional guidance as needed. It is the student's responsibility to independently pursue this option as it involves applying for the program and paying college tuition.

A college course will appear on the AGS transcript only if it 1) is approved by the Academic Dean in writing in advance and 2) represents the next step in math, science, or foreign language beyond the AGS offerings in the Course Catalog or 3) fulfills a prerequisite for a required AGS course.

ONLINE SCHOOL FOR GIRLS (ONE SCHOOLHOUSE)
Upper School students interested in academic enrichment who have exhausted advanced academic coursework have the opportunity to pursue online course work. Options for such a course might be a class that is not offered in the specific school year, a beginning level course for a student in her junior or senior year (such as language), or an Advanced Placement course. Any student wishing to pursue this alternative must receive approval from the Director of Upper School and Academic Dean.

AGS families are responsible for OSG course tuition except in particular cases. Below are the OSG courses offered in 2017-18.

AP Art History
Students enrolled in the AP Art History course examine and critically analyze major forms of artistic expression from a variety of cultures spanning 32,000 years of art. Beginning with global prehistory and ending with global contemporary art, students consider influential

forces like patronage, politics, class, belief, gender, and ethnicity in their analysis of art forms. Students become active participants in the global art world, engaging with its forms and content, as they experience, research, discuss, read, and write about art, artists, art making, and responses to and interpretations of art. By investigating a specific image set of 250 works of art characterized by diverse artistic traditions from prehistory to the present, the course fosters an in-depth, holistic understanding of the history of art from a global perspective. Students may select the AP or non-AP track in this course. AP students are expected to delve deeper into the topics, take AP-style assessments, and prepare for the AP exam in the spring.

Prerequisite: Successful completion of one year of high school history
Enrollment Fee: $1495

AP Computer Science A
The AP Computer Science course introduces the key concepts and techniques of object-oriented programming in Java. The analytic, critical-thinking, and problem-solving skills developed in this course transfer to programming in other languages on a variety of platforms. This course is designed with the idea that programming should be fun, engaging, and intuitive. Students work creatively and collaboratively with their classmates and develop a solid foundation from which to launch into a wide range of computer science areas. In today's world, having an understanding of programming concepts as well as the ability to approach problems with a "programmer's eye" have become essential skills for students and professionals. This course prepares students for the AP Computer Science A Exam in May.

Prerequisites: Algebra II and any of the following: One Schoolhouse's Computer Programming Course, OSG's or previous programming experience and instructor permission
Enrollment Fee: $1495

AP Computer Science Principles
Computer science and computing technologies are everywhere, and used in just about every imaginable occupation. This course investigates the "big ideas" found in our digital world such as the creativity in finding solutions to authentic problems, how data and information are used to forecast events and predict behaviors, and the global impacts of technology and the Internet. Using Python, students create computer programs that serve useful functions, explore the different means of representing information digitally, and discover new knowledge through the use of large data sets. Students discuss the current state of technology and its role in our everyday lives, and develop their skills in computational thinking, logical reasoning, and describing processes through algorithms. Finally, students demonstrate their learning by creating a portfolio for submission to the College Board and are prepared for the AP Computer Science Principles exam in May.

Prerequisite: None, prior programming experience recommended
Enrollment Fee: $1495

AP Calculus BC

The AP Calculus BC course is a standard course in the calculus of a single variable. The goal is to teach conceptual reasoning, enabling students to present a solution algebraically, geometrically, numerically or verbally. Emphasis is placed not only on a clear understanding of the concepts, but also on their applicability in real world situations. All of the topics in the AP Calculus BC syllabi are covered, as well as additional topics as time permits. Major topics include limits, continuity, derivatives and applications, integrals and applications, first order linear differential equations, inverse trigonometric functions, transcendental functions, infinite series, Taylor polynomials, vectors, parametrically defined functions, and polar coordinates. This student-centered course features discussions, reflections, and projects that help students to master the course material in an engaging way. Students enrolled in this course are thoroughly prepared to take the AP exam in the spring.

Prerequisite: AP Calculus AB, Honors Pre-Calculus/Trigonometry (including study of natural logarithms, series and sequences, parametric and polar functions, vectors, and limit), or regular Pre-- Calculus/ Trigonometry and OSG summer course Transitioning to AP Calculus BC, which covers those topics
Enrollment Fee: $1495

AP Statistics

AP Statistics helps students develop strategies for collecting, organizing, analyzing, and drawing conclusions from data. Each student is expected to learn how to articulate methodology, data description, and conclusions and to provide constructive comments on reports by classmates. Much of the knowledge learned in this course comes through experiential activities that challenge students to design, administer, and tabulate results from surveys and experiments. The students often work in small collaborative groups to explore problems and share ideas. Active participation, in the form of individual and group projects, peer review of student work, and discussion board conversations, are key to student success. Students may select the AP or non-AP track in this course. AP students are expected to delve deeper into the topics, take AP-style assessments, and prepare for the AP exam in the spring.

Prerequisites: AP Statistics requires successful completion of Algebra II
Enrollment Fee: $1495

AP Macroeconomics

AP Macroeconomics introduces students to major economic issues such as basic market analysis, the causes of the cycle of economic growth and recession, the problems of inflation and unemployment, the causes and consequences of federal budget deficits, and the causes and effects of international trade imbalances and currency fluctuations. Students analyze the impact of fiscal and monetary policies as well as the debates surrounding the implementation of each. This course involves extensive reading, problem-solving exercises, online discussions, and research and writing about contemporary macroeconomic issues. Multiple modalities are employed for content presentation so as to encourage

personalization; assessment evaluates each student's ability to utilize skill sets related to economic decision-making. Strong reading, algebra, and analytical skills are necessary for success, as is strong motivation. AP Macroeconomics prepares students to become informed and thoughtful and thoroughly prepare students to take the AP exam in the spring. AP Macroeconomics is recommended for juniors and seniors.

Prerequisite: Successful completion of Algebra II
Enrollment Fee: $1495

AP Microeconomics
AP Microeconomics is a course that examines how individuals (such as consumers and producers) make decisions and how these decisions affect our everyday lives. Topics discussed include the forces of supply and demand, costs of production, consumer choice, and behavioral economics, amongst others. Throughout the course, students examine various models that are used to conceptualize how our economy operates and explore the role that government plays in a given economy. As an online, college-level course, significant emphasis is placed on independent work and individual accountability. Students complete collaborative projects, group discussions, problem sets, quizzes, and tests. The curriculum is developed to prepare students for the AP Microeconomics examination in May. Strong mathematical reasoning skills and an interest in finance, business, or government aid students in this course. AP Microeconomics is recommended for juniors and seniors.

Prerequisite: Successful completion of Algebra II
Enrollment Fee: $1495

AP Music Theory
AP Music Theory introduces advanced concepts of music theory to students. The aim of this course is to improve students' performance, aural, analytical, and composition skills. AP Music Theory is an intensive, fast-paced course that touches on aspects of melody, harmony, texture, form, musical analysis, and composition. This course also includes an aural section of sight-singing, melodic and harmonic dictation, and listening examples. Each student composes and performs original compositions, both as an individual and in a group setting. All students enrolled in this course take the Advanced Placement exam in the spring. Yet AP Music Theory is not just about the exam; students experience growth in their performance skills and all around musicianship. This is a crucial course for anyone looking to pursue music professionally or for anyone who wants to pursue their passion in music.

Prerequisite: Ability to read at least one clef of music and proficiency in an instrument or voice
Enrollment Fee: $1495

AP Physics C – Mechanics
AP Physics C Mechanics is a calculus based, college level physics course. The course is especially designed for those students planning to enter college programs such as engineering or physical sciences. The goal of the course is to develop in the student the

understanding of physics through inquiry-based investigations. Students explore principles of Newtonian mechanics, work, energy, power, systems of particles, linear momentum, circular motion, rotation, oscillations, and gravitation. Differential and integral calculus is used during the course. Additional supplemental

topics are covered that build understanding of the primary College Board curriculum. Developing the ability to reason qualitatively and quantitatively is a principal focus. Those skills are developed through the use of modeling, graphing, diagramming, unit analysis, symbolic algebra and calculus, and data analysis. Laboratory exercises enhance the investigation of each topic. This course is intended to prepare students for the College Board AP Physics C Mechanics Exam.

Prerequisite: Successful completion of or concurrent enrollment in calculus
Enrollment Fee: $1495

AP Psychology
AP Psychology and Psychology introduces students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. In this course, students are presented with the psychological facts, principles and phenomena contained within the major branches of psychology. The course includes a balanced examination of: Biological Bases of Behavior, Sensation and Perception, States of Consciousness, Learning, Cognition, Motivation and Emotion, Developmental Psychology, Personality, Testing and Individual Differences, Abnormal Psychology, Treatment of Psychological Disorders and Social Psychology. Students develop a thorough understanding of the many subfields contained within psychology and the connections between them. In addition, students are also exposed to the history, methodology and ethical practices associated with psychological research. Upon completion of this course students recognize the significance of psychology and it practical applications upon the world around them. Students engage collaboratively with their classmates in projects and real-world discussions. Students may select the AP or non- AP track in this course. AP students are expected to delve deeper into the topics, take AP-style assessments, and prepare for the AP exam in the spring. Non-AP students demonstrate mastery through projects and alternative assessments.

Prerequisite: Successful completion of 9th grade
Enrollment Fee: $1495

AP US government & Politics and AP comparative Government & Politics
This yearlong course provides students with an in-depth understanding of the American government as well as various political systems around the world by covering two AP curricula. The fall semester covers AP US Government and Politics. Students learn how the American government was founded, how the electoral process works, who votes and why, and how the various branches function. Special attention is given to how the different agencies within the government interact, and how these agencies and their policies affect the daily lives of Americans. The spring semester covers AP Comparative Government and

Politics, which takes an in-depth look at six different states: Iran, Nigeria, China, Russia, Mexico, and Great Britain. In addition to learning how to conduct proper comparative studies, students analyze how these different states function, both as independent states and as part of the global community. Upon completion of this course, students have a thorough understanding of some of the major political systems across the world, which makes it easier to comprehend how our world evolves and functions. Students are prepared for both AP exams.

Prerequisite: Successful completion of one year of high school history
Enrollment Fee: $1495

Art History
Students enrolled in the AP Art History course examine and critically analyze major forms of artistic expression from a variety of cultures spanning 32,000 years of art. Beginning with global prehistory and ending with global contemporary art, students consider influential forces like patronage, politics, class, belief, gender, and ethnicity in their analysis of art forms. Students become active participants in the global art world, engaging with its forms and content, as they experience, research, discuss, read, and write about art, artists, art making, and responses to and interpretations of art. By investigating a specific image set of 250 works of art characterized by diverse artistic traditions from prehistory to the present, the course fosters an in-depth, holistic understanding of the history of art from a global perspective. Students may select the AP or non-AP track in this course. AP students are expected to delve deeper into the topics, take AP-style assessments, and prepare for the AP exam in the spring.

Prerequisite: Successful completion of one year of high school history
Enrollment Fee: $1495

Creating Tomorrow: Computer Science by Design
In the digital world, the importance of intentional design through the lens of the user experience can't be underestimated. In this course, students enhance their design and technology skills by using the design process to create software products relevant to the digital age in which we live. Combining software engineering and entrepreneurship, students create digital products using a variety of software tools and computer languages, and learn how to brand and market these products and services such as games, web sites, videos, mobile applications, etc. The design and development of their products require study in market research, conceptual design, prototype development, product implementation and testing, as well as branding and social media marketing strategies for the final product launch. Students have a choice in selecting topics or issues of interest and, through extended project work, are able to pursue their interests in depth. By the end of the course, students develop a portfolio of their work and a digital product that they may continue to develop and market forward.

Prerequisite: Successful completion of a One Schoolhouse computer science course or permission from the administration Enrollment Fee: $1495

Forensic Science
Forensic Science examines the application of science to the criminal and civil laws enforced by the criminal justice system. Students explore the science of criminology by using a combination of science disciplines, including biology, chemistry, physics, geology, and computer technology. Students learn to differentiate between actual techniques and some of those portrayed on popular television shows and also evaluate current procedures used by real crime labs to understand some of the limitations of the law, police, and forensics science. Throughout the year, students examine scientific techniques behind the analysis of physical and chemical evidence, toxicology, DNA fingerprinting, fire and explosives, glass, bones, handwriting and document analysis, and other relevant pieces of evidence. Simulated crime and accident scenes are investigated, and as evidence is collected and analyzed, students develop observation skills and deductive reasoning. The course also includes a study of the variety of careers in forensic science. This exploration is completed through a mixture of laboratory exercises, class discussions and projects, online simulations and games, and analysis of representation of forensic science in the media.

Prerequisite: Successful completion of one year of high school history
Enrollment Fee: $1495

Linear Algebra
Linear algebra is the study of vectors, the spaces in which they live, and linear mappings between those spaces. It gives us a powerful new way to think mathematically, and it has many applications in science, engineering, economics, and any field in which multiple variables interact in ways that can be modeled by systems of linear equations. It's therefore a required and very useful subject in college for many science and engineering majors. This yearlong course covers a typical one-semester college linear algebra curriculum, with topics including matrix algebra, vector spaces, eigenvalues and eigenvectors, and applications to differential equations. In the sequence of standard math courses, linear algebra can be studied either before or after multivariable calculus. It's a great fit for the student who has completed AP Calculus AB or BC, who is passionate about challenging herself to think in new ways, and who wants to increase her ability to tackle problems in the real world.

Prerequisite: Successful completion of AP Calculus AB or equivalent
Enrollment Fee: $1495

Multivariable Calculus & Differential Equations
After covering some advanced topics in the calculus of a single variable, Multivariable Calculus and Differential Equations explores topics that are studied in a typical college-level Calculus III course, including vectors and vector-valued functions, curves and surfaces in space, partial derivatives and gradients, multiple integration, and line and surface integrals. The course's final unit provides an introduction to differential equations, including exact first-order equations, second-order homogeneous and nonhomogeneous linear equations, and series solutions. Built on a foundation of sophisticated problem solving, the course also features discussions, projects, and exploratory activities that help students develop their

advanced math skills in a collaborative and creative way.

Prerequisite: Successful completion of AP Calculus BC or equivalent
Enrollment Fee: $1495

Neuroscience
A spongy, three-pound mass of tissue—the brain—controls every aspect of the body, ranging from circulation and appetite to emotion and memory. Because the brain shapes our thoughts, beliefs, hopes, dreams, and imaginations, the brain is what makes us human. By the end of the first semester, students understand the structure of the brain and how the brain senses, thinks, behaves, and creates memories for learning and language, as well as how the environment (stress, diet, exercise and time) impacts the brain. We also explore brain diseases, disorders, and treatments. Armed with this solid foundation in neuroscience, students spend the second semester learning to think like doctors. In this project-based class, students engage in individual research projects and seminar-style problem solving. Utilizing neuroscience as a foundation to explore any human biology topic, students are guided through a self-designed, long-term research project. This course is designed for students who are considering college majors in a medical or health related field, such as medicine, psychology, occupational therapy, neural or biomedical engineering, public health, lab neurobiology research, radiology or imaging, speech-language pathology, or kinesiology.

Prerequisite: Successful completion of one year of high school laboratory science or instructor permission
Enrollment Fee: $1495

Psychology
AP Psychology and Psychology introduces students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. In this course, students are presented with the psychological facts, principles and phenomena contained within the major branches of psychology. The course includes a balanced examination of: Biological Bases of Behavior, Sensation and Perception, States of Consciousness, Learning, Cognition, Motivation and Emotion, Developmental Psychology, Personality, Testing and Individual Differences, Abnormal Psychology, Treatment of Psychological Disorders and Social Psychology. Students develop a thorough understanding of the many subfields contained within psychology and the connections between them. In addition, students are also exposed to the history, methodology and ethical practices associated with psychological research. Upon completion of this course students recognize the significance of psychology and it practical applications upon the world around them. Students engage collaboratively with their classmates in projects and real-world discussions. Students may select the AP or non- AP track in this course. AP students are expected to delve deeper into the topics, take AP-style assessments, and prepare for the AP exam in the spring. Non-AP students demonstrate mastery through projects and alternative assessments.

Prerequisite: Successful completion of eighth grade
Enrollment Fee: $1495

Statistics

AP Statistics helps students develop strategies for collecting, organizing, analyzing, and drawing conclusions from data. Each student is expected to learn how to articulate methodology, data description, and conclusions and to provide constructive comments on reports by classmates. Much of the knowledge learned in this course comes through experiential activities that challenge students to design, administer, and tabulate results from surveys and experiments. The students often work in small collaborative groups to explore problems and share ideas. Active participation, in the form of individual and group projects, peer review of student work, and discussion board conversations, are key to student success. Students may select the AP or non-AP track in this course. AP students are expected to delve deeper into the topics, take AP-style assessments, and prepare for the AP exam in the spring.

Prerequisite: Successful completion of Algebra II
Enrollment Fee: $1495

Atlanta Girls' School Founders' Charge

All of life is school; therefore, be in attendance daily.
Choose wisdom, generosity, and kindness as your teachers.
Judge tenderly and be forgiving; everyone else is learning too.
During the leaden hours of loss or failure,
ask others for help and help those whose suffering is greater.
During the bright moments of success or celebrity,
say thank you and wield your power with compassion and humility.

All of life is journey; therefore, pack lightly and travel broadly.
Choose courage, integrity, and wonder as your companions.
Along the way, unload yourselves of fears and hubris.
Find work that profits your souls and gives you purpose.
Leave each corner of the world better than the way you found it.
Keep your hearts soft and your minds open.
Listen. Ask questions. Be bold. And wed yourselves to joy.

Written by Emily Ellison
Atlanta Girls' School Co-Founder
Upon the first AGS graduation ceremony on May 17, 2004