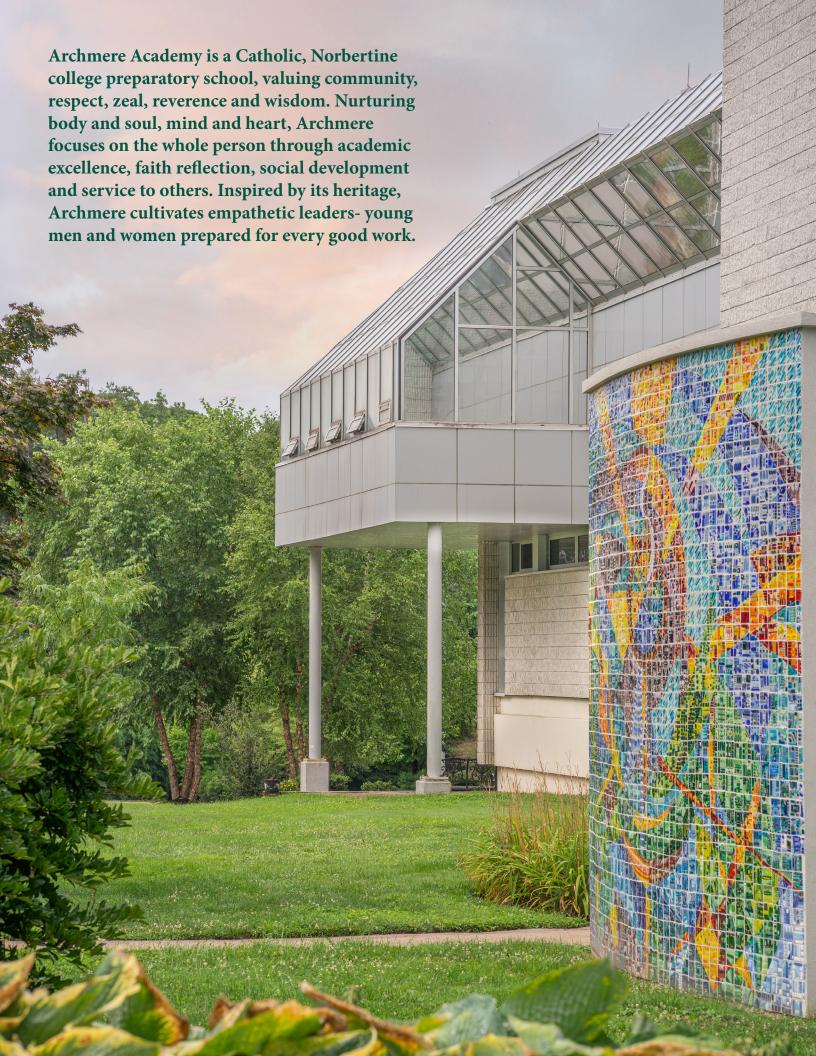


Course Catalog **2023-2024** 





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# **Academic Philosophy**

Archmere's rigorous program of studies challenges all students at College Preparatory, Honors, and Advanced Placement levels to advance their critical thinking, sharpen their academic skills, take ownership of their learning potential, and advocate for their own educational goals so that they can explore and discover new opportunities, experience success, and empower themselves and each other to reach new levels of personal distinction and academic achievement.

Archmere takes particular pride in recognizing and serving the variety of achievement levels among its students, all of whom are seeking the rigorous mix of challenge and success that suits their strengths across different disciplines. Success in Archmere's demanding College Prep classes might lead students to advance to its Honors-level courses, and later to AP-level classes. It is this flexibility that sets them up for success at Archmere at beyond.

# **Graduation Requirements**

Students are required to take six core courses per semester, one elective course per year, and two credits of Health Education for a total of 54 credits. Any course, whether core or elective, over the six required core classes will count towards the one required elective credit. Students who are taking three AP courses in one year may opt out of the required elective course. Students taking four or more AP courses in one year may also opt out of their sixth core course. Students who meet the requirements may also receive the Global Studies Diploma.



# **Art & Design**

Students looking to enroll in our many studio art classes are required to satisfy two full semesters of foundation prerequisites: Introduction to Drawing and Introduction to Design, courses that introduce students to the fundamentals of drawing and design skills. Following these foundation courses, students may take a variety of elective courses in a wide range of media. Our broad variety of elective offerings provide rich learning experiences in each major studio discipline, including painting, traditional darkroom photography, ceramics and glass, architectural and environmental design, digital art, graphic design, and printmaking. Throughout the program, students are expected to maintain sketchbooks and portfolios to document their research, creative process, and finished work. Students concentrating their elective courses in the Fine Arts program are expected to develop a body of work that demonstrates critical thinking, artistic development, and an authentic understanding of the elements and principles of art and design.

Recommendation for AP art courses is based on demonstrated technical skills and emerging personal artistic vision as evidenced in the student's portfolio. Students who have not been recommended for AP Studio Art and would like to be considered should prepare and submit a portfolio of 6-10 works of art in the AP course they wish to take. Recommendation is ultimately based on student's demonstrated aptitude, attitude & achievement in previous art elective courses, that this student is capable and ready to undertake a college-level fine art course, one requiring them to be independent, selfmotivated, focused, and committed

- In previous art electives, this student has demonstrated advanced and/or sophisticated creative and critical capacities and technical studio skills
- Student is an independent, self motivated and curious learner. Student is not dependent on the teacher for creative pursuits and idea generation.
- Student consistently met or exceeded basic project requirements in other art elective courses, and has demonstrated originality, creative risk taking and experimentation in their solutions to class projects
- Student has demonstrated a mature, disciplined commitment to their creative pursuits as evidenced by an excellent work ethic

# Introduction to Drawing | Credits: 1.00 Grades 9, 10, 11

This introductory foundation course equips students with the fundamental drawing skills needed to undertake more advanced exploration in art and design. The course emphasizes both the design process and a solid understanding of the elements and principles of design. Students will also apply art vocabulary and critical thinking skills throughout the creative process as well as in formal class critiques. Students will explore various drawing techniques, both black and white and in color, using a variety of traditional materials. Students will study art concepts and drawing techniques in both sketchbook assignments and more "finished," accomplished drawing projects. Emphasis will be on observational drawing, in particular still life composition, human form, proportions. Representations of interior and exterior architectural space (perspective) will also be explored. Both Introduction to Drawing and Introduction to Design are required prerequisite courses for Archmere's advanced studio elective art classes.

# Introduction to Design | Credits: 1.00 Grades 9, 10, 11

In this one semester introductory Design course, students will explore the elements and principles of two dimensional and three dimensional design, as well as color theory, abstraction, non figurative and figurative design, principles of composition, and more. We will also intentionally apply the design process to a variety of problems to develop original innovative solutions to 2D studio projects as well as functional and sculptural 3D design pieces. We will work in both traditional studio materials as well as digital and new media as we develop your foundation in 2D and 3D Design to prepare students for advanced electives in Archmere's visual art program and beyond.

#### Junior Portfolio 2D Design | Credits: 1.00 Grade 11

In Junior Portfolio 2D Design, students will strengthen their portfolios in areas of drawing, digital art, photography, and two dimensional design. This course provides committed juniors with an opportunity to develop skills and concepts introduced in previous coursework to create an advanced body of work. Students interested in preparing a portfolio for college admissions, fine art scholarships, and to prepare for AP Art & Design (AP 2D Design, AP 3D Design, or AP Drawing) senior year are encouraged to take Junior Portfolio. Throughout the course, students will participate in both formal and informal class critiques to sharpen their critical thinking skills and expand their artistic vocabulary. Students are expected to maintain a sketchbook to function as a resource for research, concept development and material

investigations. Students interested in taking AP Studio Art senior year are encouraged to enroll in one or both of the Junior Portfolio courses, as they provide an experience to work in series, develop a portfolio for college admissions and the Scholastic Art Awards Portfolio category.

Prerequisite: Introduction to Drawing, Introduction to Design, at least one studio art class, and department approval.

#### Junior Portfolio 3D Design | Credits: 1.00 Grade 11

In Junior Portfolio 3D Design, students will strengthen their portfolios in three dimensional design. This course provides committed juniors with an opportunity to develop skills and concepts introduced in previous coursework to create an advanced body of work. Students interested in preparing a portfolio for college admissions, fine art scholarships, and to prepare for AP Art & Design (AP 2D Design, AP 3D Design, or AP Drawing) senior year are encouraged to take Junior Portfolio. Throughout the course, students will also participate in both formal and informal class critiques to sharpen their critical thinking skills and expand their artistic vocabulary. Students are expected to maintain a sketchbook to function as a resource for research, concept development and material investigations. Students interested in taking AP Studio Art senior year are encouraged to enroll in one or both of the Junior Portfolio courses, as they provide an experience to work in series, develop a portfolio for college admissions and the Scholastic Art Awards Portfolio category.

Prerequisite: Introduction to Drawing, Introduction to Design, and at least one studio art elective class. Prospective AP students are encouraged to take Junior Portfolio in their junior year.

# AP 2D Design | Credits: 2.00 | CORE Grade 12

This portfolio is designated for work that focuses on the use of two dimensional (2 D) elements and principles of art and design, including point, line, shape, plane, layer, form, space, texture, color, value, opacity, transparency, time, unity, variety, rhythm, movement, proportion, scale, balance, emphasis, contrast, repetition, figure/ ground relationship, connection, juxtaposition, and hierarchy. Students should consider how materials, processes, and ideas can be used to make work that exists on a flat surface. Students can work with any materials, processes, and ideas. Graphic design, digital imaging, photography, collage, fabric design, weaving, fashion design, fashion illustration, painting, and printmaking are among the possibilities for submission. Still images from videos or films are accepted. Composite images may be submitted.

## Ceramics: Pottery | Credits: 1.00 Grades 10, 11, 12

Students are taught the skills necessary to create ceramic vessels on the potter's wheel. They will create functional as well as sculptural forms using the wheel as the primary means of forming vessels. Students will explore several techniques in firing their pottery, including earthenware, oxidations, stoneware firings, and Raku reduction firing.

Prerequisite: Introduction to Drawing and Introduction to Design

#### AP 3D Design | Credits: 2.00 | Grade 12 | CORE

This portfolio is designated for work that focuses on the use of three dimensional (3 D) elements and principles of art and design, including point, line, shape, plane, layer, form, volume, mass, occupied/unoccupied space, texture, color, value, opacity, transparency, time, unity, variety, rhythm, movement, proportion, scale, balance, emphasis, contrast, repetition, connection, juxtaposition, and hierarchy. Students should consider how materials, processes, and ideas can be used to make work that involves space and form. Students can work with any materials, processes, and ideas. Figurative or nonfigurative sculpture, architectural models, metalwork, ceramics, glasswork, installation, performance, assemblage, and 3 D fabric/fiber arts are among the possibilities for submission. Still images from videos or films are accepted. Composite images may be submitted.

# AP Drawing | Credits: 2.00 | CORE Grade 12

This portfolio is designated for work that focuses on the use of mark-making, line, surface, space, light and shade, and composition. Students should consider marks that can be used to make drawings, the arrangement of marks. the materials and processes used to make marks, and relationships of marks and ideas. Students can work with any materials, processes, and ideas. Drawing (analog and digital), painting, printmaking, and mixed media work are among the possibilities for submission. Still images from videos or films are accepted. Composite images may be submitted.

# Adobe Creative Suite | Credits: 1.00 Grades 10, 11, 12

This introductory level course explores the full range of creative possibilities available in the Adobe Creative Suite. Students will be introduced to the sophisticated capabilities of Photoshop, In Design, After Effects, and Premiere Pro to create original photography, graphic design, film, digital art, and other forms of technologybased visual communication using industry-grade professional software.

# Ceramics | Credits: 1.00 Grades 10, 11, 12

This course provides a comprehensive introduction to the skills and techniques of working in clay. Students explore a wide range of techniques and processes to create three-dimensional ceramic and sculptural forms, including slab, coil, casting, and wheel-thrown vessels. Students will develop an understanding of the sculptural and expressive possibilities and processes of working with clay to develop their own personal and expressive language. In addition, students will also explore endless surface possibilities including inlay, glazing, texture, and more. Students will also explore several techniques in firing their pottery, including earthenware, oxidations, stoneware firings and Raku reduction firing.

#### Publication Design | Credits: 2.00 Grades 9-12

The Publication Design course is a full-year course available for students in all grade levels that provides real-world experience and results in the current volume of Archmere's yearbook, The Patio. Through this class, students are afforded the unique opportunity to capture and document their classmates' journeys in a way that will become a permanent part of Archmere's history. At the beginning of the course, students will complete individual assignments to learn the basics of publication design and develop their skills. Students will learn the principles of layout, typography, color, and graphic design as they apply to creating effective and engaging publications. Additionally, students will learn about photography, journalism, and marketing from content-area experts within the Archmere community. Assignments will evolve to be yearbook spread-centric and require teamwork with the rest of the students in the class. It is at this juncture that students will be able to apply for leadership roles (editor-in-chief, copy editor, design editor, and photography editor) within the class. Students enrolled in this course will have the opportunity to work as a social media marketing intern for Archmere's Marketing & Communications Department.



# **Computer Science**

The Core Computer Science Curriculum: Archmere offers three Computer Science courses from a beginning level introductory course to two AP level courses. Students with no programming experience can learn coding fundamentals in Archmere's Introduction to Computer Programming with Robotics course. In this class, students work in groups to build and code an actual robot instructing it to move around, flash lights, and navigate obstacles autonomously using built-in sensors. Then, students may enroll in AP Computer Science Principles which expands upon their fundamental programming skills. Unique to this course is a focus on how data is stored in computers, how the internet works, and the impacts computing has had on our society. Archmere's computer science curriculum culminates in AP Computer Science A where students learn to code in an object oriented language. Here students will use the fundamentals that they have learned in previous courses and apply those skills to build a hierarchy of classes. These courses prepare students not only for college, but also for a career - and life in general - as they learn about the physical and logical systems that make information available, and the systems that help organizations, schools, and people operate and connect.

An Exclusive Course for Future STEM Research: Archmere Academy enjoys an incredible connection with the Children's Hospital of Philadelphia (CHOP) and its Center for Data Driven Discovery in Biomedicine. Through this relationship, Archmere offers the Advanced Cancer Research and Analysis course which combines a biology class focusing on the genetics of cancer and a computer science class focusing on analyzing data sets as one would in a research setting. Students enrolled in this course have the exclusive opportunity to intern at CHOP in the following summer.

Activities: Outside of our academic curriculum, students can participate in Archmere's RobAuktics Club in which students create and program a robot to compete against other schools and groups in an annual robotics competition. Robots in these competitions may need to pick up and carry objects, launch balls into a bin, and even jump and climb up a ladder!

Students with an interest in cybersecurity and cracking codes can also compete in the CodeBusters competition with Archmere's Science Olympiad team. In Science Olympiad, students compete against other schools in various science based competitions.

## Intro to Computer Programming | Credits: 1.00 | CORE Grades 9, 10, 11, 12

Introduction to Computer Programming (with Robotics) introduces students to the fundamental ideas of computer science. The course is designed to be an introductory course but assumes students have basic literacy in computers (creating folders, moving files, and installing applications). Topics include basic input and output commands, control statements, iterations, boolean logic, and debugging strategies. Students will develop these skills and broaden their knowledge of these topics while using a series of hands-on projects. The ultimate goal of this course is to introduce students to the problem-solving techniques required to create useful programs. Earning a minimum of a B+ in this course (and in Algebra I) is a prerequisite for both AP Computer Science Principles and AP Computer Science A.

# AP Computer Science A | Credits: 2.00 | CORE Grades 11, 12

AP Computer Science A is equivalent to a first semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language.

These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science A course curriculum is compatible with many CS1 courses in colleges and universities.

Students should expect to be coding both in writing and by using an IDE. Throughout the year, students will be completing AP level assessments to challenge their knowledge and understanding of the Java language as well as to prepare for the course exam created by the College Board.

Prerequisites: students must earn a minimum of an A in their most recent computer science course and their most recent math course. Also, the student in AP Comp Sci A must be concurrently enrolled in Algebra II/Trig or higher.

Note: Students may enroll simultaneously in AP **Computer Science Principles and AP Computer Science A.** 

# AP Computer Science Principles | Credits: 2.00 | CORE Grades 10, 11, 12

The AP Computer Science Principles course is designed to be equivalent to a first semester introductory college computing course. In this course, students will develop computational thinking skills vital for success across all disciplines, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends. The course engages students in the creative aspects of the field by allowing them to develop computational artifacts based on their interests. Students will also develop effective communication and collaboration skills by working individually and collaboratively to solve problems, and will discuss and write about the impacts these solutions could have on their community, society, and the world. This class is not a prerequisite for AP Computer Science A.

Prerequisite: A minimum of a B+ in both Intro to Computer Programming and Algebra I.

Note: Students may enroll in AP Computer Science **Principles and AP Computer Science A simultaneously** 

# Honors Computer Science | Credits: 2.00 **Grades 11.12**

This course was developed to be taken in place of the AP Computer Science A curriculum and will introduce students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object oriented and imperative problem solving and design using the Java language, with a focus more driven towards solving programming challenges rather than preparing for a College Board exam.

These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The Honors Computer Science course curriculum will provide a strong foundation for the majority of first year computer programming courses in colleges and universities.

Students should expect to be coding using an IDE daily, and having frequent assessments to challenge their knowledge and understanding of the Java language.

Prerequisites: students must earn a minimum of an B+ in their most recent computer science course and their most recent math course. Also, the student in Honors Computer Science must be concurrently enrolled in Algebra II/Trig or higher.



# **English**

The English department seeks to provide its students with a strong college-prep background in literature and communication skills as well as to contribute to students' moral development and their understanding of the human experience in our world. Throughout a students four years at Archmere, the English department focuses on literature, composition, and vocabulary, with an emphasis on writing. During freshman year, students will study world literature, following by American literature during their sophomore year and British literature in their junior year. Seniors focus on twentieth century and contemporary literature.

In each successive course, students build on skills and concepts previously taught. We employ a variety of techniques and resources including workshops, a writing center, journals, sample essays, collaboration, peer response sheets, and research papers; we use the paragraph and the five-paragraph essay as bases for developing student composition skills. We also use formal vocabulary textbooks and a sequential grammar program.

Students eligible for Honors and AP classes must possess strong literacy skills. Cogent thinking, solid reading comprehension, and sound writing skills are needed for success. Advanced Placement candidates should also be self-driven and willing to work with their instructor as needed. Intellectual curiosity as well as a strong work ethic are essential.

Any student with the requisite skills and who is in strong academic standing in their current class may receive a teacher recommendation for placement in an honors or AP course. Students enrolled in these courses must maintain a B average. Teachers evaluate and approve students at the end of each academic year based on both skill development and overall performance.

# Literary Genres and Composition | Credits: 2.00 | **CORF** Grade 9

Freshman English is a two semester course that stresses the use of the English language through composition and discussion. The course introduces students to various literary genres, with an emphasis on world literature. The course also includes vocabulary development, grammar, and related language skills.

# Honors Literary Genres and Composition | Credits: 2.00 | CORE Grade 9

Freshman English Honors is a two semester course that stresses the use of the English language through composition and discussion. The course introduces students to various literary genres, with an emphasis on world literature. The course also includes vocabulary development, grammar, and related language skills. Covering the same material as the college-prep course, the Honors course has additional reading assignments, more demanding standards for writing assignments, and works at an accelerated pace. Honors students are expected to possess advanced skills in writing, reading comprehension and grammar and also be eager and proactive to improve those skills. Students should anticipate 45 minutes of homework each night.

Prerequisite: Department approval based on the entrance exam and test scores.

# American Literature and Composition | Credits: 2.00 CORE Grade 10

Sophomore English is a two semester course which presents an intensified study of the principles of writing including vocabulary, grammar, usage and organization. The course includes a chronological survey of major works of American Literature, along with reading and analytical skills. Second semester includes a short research paper project done in conjunction with the history department.

# Honors American Literature and Composition Credits: 2.00 | CORE Grade 10

Honors American Literature and Composition is a two semester, sophomore course which presents an intensified study of the principles of writing including vocabulary, grammar, usage and organization. The course includes a chronological survey of major works of American Literature, along with reading and analytical skills. Second semester includes a short research paper project done in conjunction with the history department. In addition to the work of the college prep course, the Honors classes analyzes more historical selections throughout the year, reads two additional novels, and generally moves at a swifter pace. Students should anticipate 45 minutes of homework each night.

Prerequisite: Department approval.

# British Literature and Advanced Composition Credits: 2.00 | CORE Grade 11

Junior English focuses on a survey of British Literature and advanced composition skills. The goal of the course is to improve students' analytical thinking and use of evidence. The writing proceeds through various techniques of organizing the medium-length essay and culminates in a second semester research paper done in conjunction with the history department.

# AP English Language and British Literature | Credits: 2.00 | CORE Grade 11

AP English Language and British Literature surveys British literature and introduces advanced writing skills; in doing so, it also prepares students for the AP English Language exam. The AP Language exam tests students on rhetoric and argument; according to the College Board course description, "the purpose of the AP English Language and Composition course is to enable students to read complex texts with understanding and to write prose of sufficient richness and complexity to communicate effectively with mature readers." The course prioritizes critical thinking, close reading, and careful writing.

Prerequisite: Department approval

#### Drama and the Modern World | Credits: 1.00 | CORE Grade 12

The course will focus on 20th century and contemporary interpretations of theatre from Ibsen to more contemporary authors. We will look at plays both as text and as a medium for performance. Classes will include a focus on staging and specific dramatic components. It will also be the goal of this course to analyze theatrical content and structure in sophisticated written essays.

#### Short Fiction | Credits: 1.00 | CORE Grade 12

The purpose of this course is to study in depth the literary forms of the short story and the short novel and to analyze the five basic elements of plot, theme, character, setting and point of view. In our analysis, we will seek not only to understand the author's intent, but also the social, political and cultural context depicted in the work. This course will also foster the ability to respond to literature, to sharpen critical thinking, to improve analytical writing and listening skills and to read representative texts of the 20th century and contemporary literature.

# Creative Writing | Credits: 1.00 | CORE Grade 12

A course designed for the student who wants to deepen his or her experience of writing as an art form. The course involves an in-depth examination of models of poetry, short story, and essay (both personal and expository). There will be a series of writing assignments in each genre designed to enhance the student's understanding of the form and enhance each student's appreciation of the style and vocabulary of the literary imagination. The course also explores the meaning and implications of the creative impulse. Creative Writing is an intense seminar course designed for students seriously pursuing the art of creative writing.

Prerequisite: Department Approvalß

# Non-Fiction Literature | Credits: 1.00 | CORE Grade 12

This senior elective explores non-fiction literature in books, essays, articles, poetry, and/or drama to discover the character, conflicts, themes, and imagery too often associated only with fiction. By discussing this literature in a seminar format and writing critical essays, students will study and analyze non-fiction work, both historical and contemporary, through a wide range of (possible) topics, from sports to pop culture, manners to movies, catastrophe to survival, and peace to politics.

# Outcasts & Demons | Credits: 1.00 | CORE Grade 12

This course will examine the subjects of isolation, persecution and demonization prominent in 20th century and contemporary literature by exploring the historical, philosophical, and moral issues that confront humanity. What happens when we lose-through weakness or cowardice or despair—that which makes us human, forever changing the course of our goodness? What social and cultural issues cause groups or individuals to feel marginalized or demonized? This seminar course will use a variety of genres (novels, short stories, drama) to examine alienation as a common theme in modern literature. Ultimately, it will also seek to discover what, if anything, can restore us to our decency and to our world.

# College Composition and Literary Analysis | Credits: 1.00 | CORE Grade 12

This elective aims to reinforce a senior's opportunity to prosper at college-level writing and literary analysis. By focusing on the fundamental components of successful writing and critical reading, College Composition and Literary Analysis provides a final, comprehensive review and synthesis of those skills central to Archmere's English program.

#### AP English Literature | Credits: 2.00 | CORE Grade 12

A two semester college-level course designed to prepare students for AP Literature and Composition exam and to emphasize rigorous analysis of poetry, prose, and drama. The course will broaden and deepen the students' knowledge of literature and their critical and analytical thinking and writing skills. Second semester will include more poetry and drama than the first and will emphasize specific test-taking techniques. Both semesters will require a demanding variety of critical compositions, independent study, and intensive reading. All spring senior elective courses will include a literaturebased research paper. Students taking more than one elective will complete a short research project in one of the electives and the full project in the other. If you want to take two English courses, fill in one of them as an elective (rather than as a second choice) on your course selection sheet. Students must take at least one elective each semester.

Prerequisite: Senior Standing; Department approval



# **History**

Archmere's History Department provides students with an understanding of the world, specific knowledge about the past, and important college level skills by developing students' abilities to read critically, write clearly, speak persuasively, and utilize new technologies. Additionally, the History Department makes connections across the curriculum. The department supports joint research projects with the English Department, the use of foreign languages, and the development of computer skills. Courses often refer to the history of art, literature, science, and technology. The department also supports extra-curricular activities such as Model UN, academic bowls, mock trial, presidential debates, current events competitions, and field trips which help students demonstrate skills emphasized in the history curriculum.

In the process of teaching about the world's cultural diversity, and the ways of good citizenship, the History Department aims to fulfill Archmere's mission to provide students with the ability to understand their moral responsibility to the global community.

Students begin their study of the world with a survey course on world civilizations that allows the students to learn fundamental skills in organization, analysis, and presentation of research in their freshman year. The following year, the focus turns to American History while working to synthesize information, develop conclusions, and learning the process of the research paper. Students delve deeper into European history during their junior year, along with studying the global impact of western civilization through group discussion, primary and secondary source readings, and the research paper. In students final two years at Archmere, thistory electives that focus on more specific topics rotate into the curriculum, These topics can include civil rights, economic principles, law and legal issues, and conflict in the 20th century. Students can expect a seminar atmosphere centered on discussion of readings and presentation of research.

In order to take an AP history course, a student must demonstrate a consistent work ethic, an understanding of historical complexities, well-developed writing skills, and a willingness to be challenged. Based on both the student's demonstration of these skills and their concurrent success in history course of that school year, a student may receive the necessary teacher recommendation to move into the AP level.

#### World History to 1200 | Credits: 2.00 | CORE Grade 9

World History to 1200 CE analyzes the human experience from prehistoric origins to the early modern world. The course will focus on key themes such as political, economic, social, religious, intellectual and artistic developments within a global framework. Emphasis will be placed on continuity and change over time, cultural interactions, and the relationship between humans and their environment. Students will develop analytical thinking and writing skills through their evaluation of primary and secondary sources in a variety of mediums, collaborative activities and independent projects.

#### United States History | Credits: 2.00 | CORE Grade 10

Sophomore students are required to take United States History. In the general sections of United States History students can expect a survey of this country's history from the 17th century through the Vietnam Era. The course is organized chronologically but students will use themes such as politics, economics, and religion to compare and contrast the different periods. The use of primary and secondary sources will play a significant role in understanding the development of these themes over time. Throughout the course writing skills are emphasized culminating with the research paper in the spring, which is done working closely with the English Department.

#### AP United States History | Credits: 2.00 | CORE Grade 10

AP US History is a challenging course that is designed to be the equivalent of a freshman college course in a high school setting. It is a yearlong survey of American history from the age of exploration to the present. Solid reading and writing skills, along with a willingness to devote considerable time to homework and study, are necessary to succeed. Considerable time in class spent on critical thinking skills, essay writing, interpretation of original documents and historiography. Students will be assessed through daily discussion, essay writing, presentations, guizzes, exams, and the research paper.

Prerequisite: World History with B+ or higher; *Recommendation from current History teacher* 

## Europe and the Modern World | Credits: 2.00 | CORE Grade 11

During their junior year, students move from United States History to Europe and the Modern World. By examining primary sources, visual sources, and daily reading and lecture, students study European history from the Middle Ages to the Collapse of Communism in 1991. Throughout the year, the students continue to develop their research and writing skills through various activities including power point presentations and essay writing. The course

also highlights research projects to enhance the material. In the first semester, students make power point presentations on important explorers, present a speech as a delegate during the French Revolution, and recreate an Enlightenment salon by portraying a philosophe and discussing their ideas with other thinkers. During the second semester, the students work in conjunction with the English department to write a 7 10 page research paper on a European topic of their choice. Students are assessed through tests, quizzes, written assignments, projects and daily homework assignments.

# AP European History | Credits: 2.00 | CORE Grade 11

This college level honors course studies the basic principles of modern Western Civilization. It focuses on the unique cultural, political, economic, and social development of Europe and its global impact form 1450 to the present. Students learn and practice the critical thinking and writing skills necessary for college work, as well as prepare to take the College Board A.P. test in May. Success on this test may earn the student college credit.

Prerequisite: US History with an A or higher or B or higher in AP US History; Recommendation from current History teacher; Must complete summer work

# Conflict & Culture | Credits: 1.00 | CORE Grade 11, 12

Conflict & Culture will offer students the opportunity to study world history through the lens of conflict. The course will analyze the causes and impacts of various conflicts, along with the policies of the leaders and diplomats in both the waging of war and the creation of stable peace. Several types of conflict, past and present, will be examined. Students will explore issues surrounding the Rwandan genocide, Spanish Civil War, Israeli Palestinian conflict, Arab Spring revolutions, and global terrorism. Finally, the course will consider how these events impact the cultures and societies in which they are fought and how they shape the present modern world.

# Psychology | Credits: 1.00 | CORE Grade 11, 12

Most of the challenging problems or issues of our society are linked in part to human attitudes, values, and behavior. Psychology is one field that contributes to our understanding of these problems and their solutions. In this course students will be introduced to topics such as the complexities of human thought and behavior, the factors related to the differences between people, the research method as it applies to this field, and the history of important people and events in psychology. As a result students should be able to directly apply the knowledge gained from this course to their daily lives.

#### Contemporary Global Issues | Credits: 1.00 | CORE Grade 11, 12

We live in an ever changing world, and many issues continue to face the global community varying from political, social, and economic issues. Keeping this in mind, students will examine different topics using primary and secondary resources. The course is divided into 5 major sections, allowing students to analyze specific global issues and how they are interconnected. Due to the contemporary style of the course, students will be required to read current news articles, case studies, and watch news casts. Analysis of these documents is critical for preparation for the course. The course is conducted in a seminar format. Students are assessed using homework, class discussion, presentation of analysis, and current event quizzes.

# Civil Rights | Credits: 1.00 | CORE Grade 11, 12

Civil Rights: 1919 to the Present examines the structure and dynamics of civil rights movements that have transformed American history, politics, and culture. Based on the premise that multiple movements have centered upon the goal of achieving equal rights for American citizens, this course will explore movements involving perceptions of race, ethnicity, gender, and sexual identity. Students will analyze the context and consequences of the African American Civil Rights Movement, women's rights, LGBT, Chicano, and Native American movements from a combination of historical, sociological, and politico legal perspectives. Current issues and their implications in relation to events that we have studied will also serve as a basis for discussion. Assessment will be based on weekly reaction papers, presentations, guizzes, and participation in class discussions.

# Law and the Legal System | Credits: 1.00 | CORE Grade 11, 12

The course offers a primary study of practical law for everyday society. Framed within the historical evolution of jurisprudence, the course addresses several areas including criminal and juvenile justice, torts or civil matters, discrimination, consumer affairs, family law and constitutional rights. The course seeks to provide specific information about our judicial system with the intent of sparking an interest for further study. Visiting lawyers and guest lectures, along with case study evaluations, lend to the dynamic of this semester atmosphere.

# Faith in History | Credits: 1.00 | CORE Grade 11, 12

Faith in History provides students with an opportunity to explore instances when religion and philosophy became intertwined with world politics, economics, and societal movements throughout history by evaluating primary and secondary sources and engaging in debate and group discussion. Studying the complex, reciprocal relationship between these two disciplines will allow students to gain a better understanding of how their faith affects the world around them, as well as the lens through which they see it. "Awareness of one discipline enables a more informed, nuanced understanding of the other." Birmingham, UK

#### AP Government and Politics | Credits: 2.00 | CORE Grade 12

AP United States Government & Politics provides an analytical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. political reality. Considerable time in class spent on critical thinking skills, essay writing, interpretation of original documents and historiography. Students will be assessed through daily discussion, essay writing, presentations, quizzes, and exams.

Prerequisite: Rising senior; Recommendation from current History teacher; B+ or higher in US History or B or higher in AP US History

#### AP World History: Modern | Credits: 2.00 | CORE Grade 12

The course seeks to develop a greater understanding of global processes and interactions between human societies. The course reviews world history from its foundations to the present with a particular focus on the last one thousand years. Students develop skills in organizing and presenting information, analyzing primary sources, comparing cultures, and writing essays. Assessment of student performance is based on tests, quizzes, essays, presentations as well as classroom participation. The course is intended to prepare students to take the AP World History test.

Prerequisite: European History with an A or higher in CP European History or B or higher in AP European History.



# **Mathematics**

The need to understand Mathematics both at work and in everyday life has never been greater. At Archmere, we prepare our students with the information and the tools of mathematics needed for their success. Students must master the basic mechanical skills necessary to perform fundamental mathematical operations. However, we would do them an injustice if we did not develop problem-solving skills, which make use of the technology which is now and will be available to them. We incorporate real world problems that can be solved with the aid of a graphing calculator or a computer to develop students' critical thinking skills. Our minimum requirements give Archmere students a background that meets the mathematical needs for any college program. We choose to offer a strong selection of elective courses to meet the needs of a wide range of students, challenging and stretching our very best. We continue to update these courses to reflect current and emerging needs in the mathematics curriculum.

Students in Honors and AP math classes must have a solid foundation of mathematical concepts (evident from placement tests and/or from grades in previous courses) and must show a willingness to challenge themselves. Students must demonstrate a strong work ethic and the ability to work independently, using concepts taught in class on homework and test problems that might not exactly match ones done in class. Freshmen or transfers are placed in Honors based on placement tests. Current Honors students need a grade of B+ or above and approval from their current Math teacher. Students wishing to move up from College Prep to Honors must have an A in the current course, and need teacher and department chair approval, often accompanied by completion of a review packet.

#### Algebra I | Credits: 2.00 | CORE Grade 9

A year long course covering basic properties, functions of one variable, interpreting rates of change from both graphical and numeric data, properties of exponents, system of linear equations and using mathematical models to represent quantitative relationships.

#### Honors Algebra I | Credits: 2.00 | CORE Grade 9

A year long course for freshmen who have already been exposed to algebra. The course covers the same topics as Algebra 1, and adds a discussion of polynomials, matrices and probability. Students will be required to think critically and apply their skills in new and varied situations.

Prerequisite: Meeting placement exam requirements.

#### Geometry | Credits: 2.00 | CORE Grade 10

A one year course which includes the concepts of Euclidean and analytical geometry, plane figures, solids, proofs, reasoning, constructions, and algebraic connections. Students will explore geometrical ideas through hands on activities, projects and the use of technology. The goal is to develop students' spatial abilities, problem solving skills and logistical thinking.

Prerequisite: Algebra 1 or Honors Algebra 1

# Honors Geometry | Credits: 2.00 | CORE Grades 9, 10

A one year course which mirrors the topics in Geometry but with a wider scope and variety. Coordinate Geometry is emphasized throughout the year so that the students' algebraic skills are maintained. More emphasis is placed on proofs but students are encouraged to use their natural sense as opposed to a more formalized, axiomatic approach.

Prerequisite: Honors Algebra 1 or meeting placement exam requirements

## Algebra II | Credits: 2.00 | CORE Grade 11

This course will cover all the main topics of Algebra II without the added pressure of covering Trigonometry. It will review topics from Algebra I, and cover polynomial and rational functions, logarithms and exponential functions. The course will be followed by Precalculus.

*Prerequisite: Algebra 1 and Geometry* 

## Algebra II & Trigonometry | Credits: 2.00 | CORE Grades 10, 11

This one year course will discuss functions and apply the algebra and geometry that the students have learned in their first two Math courses. Roots, radicals, and polynomial, rational, exponential, logarithmic, and the trigonometric functions are covered in depth.

Prerequisite: Algebra 1 and Geometry

# Honors Algebra II & Trigonometry | Credits: 2.00 | CORE Grades 10, 11

This one year course will cover the properties of the polynomial and rational functions, logarithmic and exponential functions, and the trigonometric and inverse trigonometric functions that will be needed for the study of calculus. As time allows, the course will also cover the conic sections, parametric and polar graphs, and the elements of probability and enumeration.

Prerequisite: Honors Geometry; Department approval

#### Precalculus | Credits: 2.00 | CORE Grade 12

A full-year course which studies the polynomial and rational functions, logarithmic and exponential functions, and the trigonometric functions using data analysis and mathematical modeling.

Prerequisite: Algebra II & Trigonometry

### Honors Precalculus | Credits: 2.00 | CORE Grade 11

A full year course for those juniors who have completed Algebra II and Trigonometry and may wish to take A.P. Calculus as seniors. The course covers polynomial, rational, exponential, logarithmic, and trigonometric functions. Also included are topics of parametric equations, polar equations and probability.

Prerequisite: Algebra II & Trigonometry

# Probability and Statistics | Credits: 2.00 | CORE Grade 12

Probability and Statistics is a full-year course designed to introduce students to a variety of ways to collect and analyze data. This course will give students the opportunity to study and analyze real world data and also to interpret the statistics they see in the news and in their daily lives.

Prerequisite: Algebra II & Trigonometry

#### Honors Calculus | Credits: 2.00 | CORE Grade 12

An intermediate level, introductory, Calculus course and integration, including differentiation applications to business and science, for those students who do not require an extensive Precalculus review.

Prerequisite: Algebra II & Trigonometry with a B or higher, Honors Math Analysis, Honors Algebra II & Trigonometry, or Department approval.

# AP Calculus AB | Credits: 2.00 | CORE Grades 11, 12

A one year college level course in differentiation and integration, including techniques and applications. The course emphasizes a multi representational approach to calculus, with concepts, results, and problems expressed graphically, numerically, analytically and verbally. The Advanced Placement exam is required. Students should anticipate one hour of homework per night.

Prerequisite: Honors Algebra II & Trigonometry or Honors Math Analysis; Department approval

# AP Calculus BC | Credits: 2.00 | CORE Grades 11, 12

A one-year course taken by those students who wish to take the BC level of the Advanced Placement Mathematics Exam. The content includes those topics of the BC syllabus not covered in AP Calculus AB. Included are integration techniques, infinite series, conics, parametric and polar coordinates.

Prerequisite: AP Calculus AB; Department approval

# AP Statistics | Credits: 2.00 | CORE Grades 11, 12

A college-level non-calculus based course emphasizing four main areas: exploring/organizing data, planning a study or experiment, anticipating patterns, and statistical inference. As outlined in the AP syllabus, the focus is on modern data analysis rather than theory. Many applications from the behavior sciences will be studied. Students are expected to use the graphing calculator on the AP exam, thus this technology will be used extensively. Statistical software will also be used since students will need to interpret data. This course is excellent preparation for students interested in majoring in science, math, engineering, business, and various majors in the humanities.

Prerequisite: Algebra II & Trigonometry; Department approval.

# Advanced Linear Algebra | Credits: 2.00 | CORE Grades 11, 12

Advanced Linear Algebra is the equivalent of a collegelevel Linear Algebra course. Linear Algebra consists of the study of systems of linear equations and linear transformations using matrices and vector spaces. This course will also introduce students to other high level branches of math such as game theory and graph theory. This course is designed for advanced math students with a high interest in math and problem solving and is offered every other year: 2023-24, 2026-26, etc.

Prerequisite: Both the completion of AP Calculus AB and department approval. (This course may be taken concurrently with AP Calculus BC.)

# Economic Principles | Credits: 1.00 | CORE Grades 11, 12

Economic Principles is a one-semester course that spotlights key elements of both micro- and macroeconomics. The course is divided up into themes that highlight key economic ideologies. The economic themes used in class cover and reflect the National Economic standards as set by the NCEE. Students are also responsible for outside readings that support class discussions and lectures. Students are assessed using class discussion, presentation of analysis, papers, take-home and in-class tests and quizzes.



# Music

A Complete Program: Music Rehearsal, Theory, History, and Performance: The Music program of Archmere Academy is an elective program that focuses on the performance practices from the Renaissance to the 20th century including Jazz and Broadway. Instruction is provided mostly by direct hands-on rehearsal experience. Students also learn about music theory, music history, the principles of music performance, and rehearsal techniques. Through daily rehearsal experience, students learn the disciplines of music performance in both instrumental and vocal performance groups. Students are encouraged to develop their musical talents and abilities both through group performance and individual work. The rehearsal experience encourages students to respond to music of different time periods and of different cultures while working within the group dynamics of the ensemble.

Opportunities for Students at Different Levels: A range of activities is explored in each music course. A sequence of study takes students from Jazz Ensemble and Concert Choir to advanced musical groups such as the Stage Band and Mastersingers, where participation is by audition only. Students are encouraged to perform at a more professional level in these advanced ensembles. Instrumental students may also have the opportunity to perform in small ensembles as well as providing accompaniment for Concert Choir.

#### **Recent Instrumental Music Performances include:**

Jamaica (running a student-led band clinic)

Seattle

San Fransisco

Quebec

Jazz Fest

**New Orleans** 

**Disney World** 

#### **Recent Vocal Music Performances include:**

For the Governor of Delaware

For Pope Frances, Pope John Paul II, and Pope Benedict XV At Citizens Bank Park for the National League Playoffs

Rome, Italy

Florence, Italy

Assisi, Italy

Naples, Italy

Chicago

**New York** 

San Francisco

**Toronto** 

Orlando

Carnegie Hall (3 times)

Seattle

Williamsburg, VA

# Concert Choir | Credits: 1.00 Grades 9, 10, 11, 12

The Concert Choir studies representative literature from the Renaissance through the Contemporary period. Emphasis is placed on the development of choral tone, proper vocal production, proper rehearsal techniques, musicianship, and some music history. The Concert Choir performs both a cappella and accompanied works, occasionally incorporating students from the instrumental groups, and at times bringing in musicians from the community. The Concert Choir performs two concerts annually: The Christmas Concert, and The Spring Concert.

# Jazz Ensemble | Credits: 1.00 Grades 9, 10, 11, 12

This is an entry level course which focuses on the primary skills of jazz, including instrumental technique, improv, and rhythm. A working knowledge of an instrument is recommended, but not required. Instrumentation is comprised of the following: Alto Sax, Tenor Sax, Bari Sax, Trumpet, Trombone, Guitar, Bass, Keyboards, Drums, but students playing other instruments are encouraged to join and transfer their musical knowledge into a new instrument. This ensemble performs throughout the year as necessary. Genres of study include but are not limited to rock, swing, funk, and jazz. Participation in this course allows students to audition for Stage Band, with Director approval.

# Stage Band | Credits: 1.00 Grades 10, 11, 12

This advanced ensemble places special emphasis on the Bjazz, rock, funk, and swing genres, but may additionally include blues, bebop, pop, etc. This course offers a more in-depth look at the various genres and allows for deeper study and understanding. Instrumentation will be fashioned after such groups as Maynard Ferguson, Brian Setzer Band, Spyro Gyra, and Tower of Power and is comprised of the full sax choir, trumpets, trombones, and complete rhythm section. Enrollment into Stage Band is by audition only. This is the main performance ensemble of the instrumental music department. There is also a yearly required travel performance component to this ensemble which will be discussed prior to audition process.

# A History of the Broadway Musical | Credits: 1.00 | CORE Grades 10, 11, 12

"A History of the Broadway Musical" will discuss how the Broadway musical as we know it today evolved from Early America (mid 1700's) to present day. There will be a focus on how societal demands and economics changed and influenced(s) what was and is written for the Broadway musical stage. It will identify who were and are the influential writers, directors, choreographers, composers, and actors that brought the art form to today's standard.

# Music in Film | Credits: 1.00 | CORE Grades 11, 12

Students will receive an overview of the history of film and the music that goes into it including a survey the history of music in feature-length films from the silent era to present day with a concentration on the way music creates mood and moves the story forward. Visual examples mixed with thematic scoring will provide the basis for extensive aural analysis. This course covers a sampling over 100 films with a concentration of films of influence and culturally important films..

# Digital Audio Production | Credits: 1.00 | CORE Grades 9, 10, 11, 12

This course allows students to learn about the sound/ music production process. This will include recording, editing, and mixing audio, including spoken word, acoustic instruments, electronic instruments, vocal tracks, and V/O. Skills acquired in this course are necessary in all aspects of sound creation, podcast recording, and broadcasting, etc. The course will use Logic Pro X, an Apple product which is native to MacBooks. Topics in this course will follow different streams of sound manipulation towards the goal of better recording, editing, and mixing.



# **Physical & Life Sciences**

Science Department Goals: The Science Department of Archmere Academy strives to educate the whole student, to encourage and support each student through depth of curriculum, to develop their ability to create scientific arguments, to teach students to interpret information using a scientific lens, and to prepare students for the ever advancing technological society in which we live.

Our Curriculum is a Living Organism: The Archmere Academy Science Department believes that the study of science involves a thought process that is beneficial to all students regardless of their choice of college or major. The department sees its curriculum as a living organism that needs to continually grow and adapt in order to prepare our students for a technologically and scientifically demanding society. The department therefore strives to combine tried and traditional methods of education with new and innovative methods in an effort to provide its students, with not merely a good science education, but with the best science education available.

All students are required to take six semesters of science for graduation. Included in the six semesters are:

Two semesters each of Biology, Chemistry, and Physics

AP, Elective, and Activity Offerings: Advanced Placement courses are offered in Biology, Chemistry, Physics and Environmental Science. A variety of electives are also offered including anatomy and physiology, marine biology, food chemistry, forensic science, and engineering. These allow students to explore the many varied applications of science and possible career opportunities in the scientific field. Outside of the curriculum, the department offers many extracurricular activities, including the TEAMS competition, the Science Olympiad, horticulture club, robotics, and the National Chemistry and Physics Olympiads.

An Exclusive Course for Future STEM Research: Archmere Academy enjoys an incredible connection with the Children's Hospital of Philadelphia (CHOP) and its Center for Data Driven Discovery in Biomedicine. Through this relationship, Archmere offers the Advanced Cancer Research and Analysis course which combines a biology class focusing on the genetics of cancer and a computer science class focusing on analyzing data sets as one would in a research setting. Students enrolled in this course have the exclusive opportunity to intern at CHOP in the following summer.

# Biology | Credits: 2.00 | CORE Grade 9

This course, an introduction to the study of all living things and the properties of life, is a general survey of the biological principles associated with a college-prep Biology course. Students will explore the characteristics of life through topics such as cell interactions and heredity that build an overall knowledge of systems and functions essential to our existence. In order to prepare students for further studies in high school and college courses, this course covers the standards associated with typical high school Biology courses in the region. Each topic is covered in less depth than at the Honors Biology level, but the same topics are covered. Laboratory activities are an important component throughout the year and students are expected to participate in a variety of laboratory procedures that will require them to apply the principles they have learned. 9th graders are placed into Biology based on a placement exam.

### Honors Biology | Credits: 2.00 | CORE Grade 9

Honors Biology is a two semester course designed for 9th graders. The course is designed to survey all major topics in the study of living things including biochemistry, genetics, cell structure and function, evolution, animal and plant physiology, and ecology. In addition to the lecture component, the course includes weekly laboratory exercises meant to strengthen the students' understanding of the concepts presented in class that week. The course is intended to be a challenging, college preparatory level course.

Prerequisite: Placement based upon teacher recommendation and placement test for 9th graders.

# Chemistry | Credits: 2.00 | CORE Grades 10, 11

Chemistry is a one year course that is intended to introduce students to general inorganic chemistry concepts and lab techniques. The course covers general principles, problem-solving and laboratory experiences. Topics considered include: atomic theory, bonding, nomenclature, stoichiometry, gas laws, solutions and acids-base chemistry. Laboratory experiences are a combination of "hands-on" experiments, computer simulations and are scheduled to coincide with lecture topics Typical experiments include: types of reactions, solution preparation, acid-base titration, gas laws, and the use of Vernier probes for data collection and analysis. Classroom instruction includes a combination of lecture. group work and activities utilizing interactive platforms, such as ExploreLearning and Pivot Interactives.

# Honors Chemistry | Credits: 2.00 | CORE Grades 10, 11

This is a general chemistry course that stresses theory, problem-solving, and the reinforcement of topics via laboratory experiments. First semester topics include scientific measurement, atomic structure, chemical bonding, thermochemistry, and states of matter. In the second semester, topics include gas laws, kinetics, equilibrium, and acid--base chemistry. Instruction of topics includes lecture, activities, simulations, and problem solving. The laboratory experiments are general chemistry experiments and computer simulation labs, and are scheduled to coincide with the lecture material. The laboratory program stresses proper lab technique and safety, and students work in pairs to collect data. Many experiments include use of the Vernier probes and software to acquire data electronically.

Prerequisite: Minimum of B in Honors Biology and department approval. Math level will be evaluated in the recommendation process.

# Physics | Credits: 2.00 | CORE Grades 11, 12

The Physics course is divided into three sections: Mechanics, Vibrations & Waves, and Electricity & Magnetism. The course is well reinforced with lab experiments that will help fortify the theoretical concepts. You will use computers for direct measurements, calculations, and graphing, creating physical models. The knowledge of such applications as Interactive Physics 5.0, Logger Pro 3.0, Microsoft Word, Excel, are necessary.

# Honors Physics | Credits: 2.00 | CORE Grades 11, 12

This course is a rigorous introduction to physics without the use of calculus. The topics in this course include Mechanics, Waves, Electricity, and Magnetism (time permitting). This course emphasizes both a conceptual understanding of physics and numerical problem solving. The course is designed to be equivalent to a university course in physics for a non-science major. Laboratory work is a significant portion of the class time and a significant component of the grade. Labs are designed to provide students with hands-on experience of the physical phenomena and illustrate practical applications of the topics.

Prerequisite: Minimum of B in Honors Chemistry or a B+ in Chemistry; previously or concurrently enrolled in Honors Algebra II and Trigonometry; department approval.

## AP Biology | Credits: 2.00 | CORE Grades 10, 11, 12

The AP Biology is a rigorous two semester biology course equivalent to the two semesters of biology for biology majors at a university or college. The course covers a breadth of topics ranging across all realms of biology. The core curriculum of the course centers on the Campbell Biology text and the mandates for the course from the College Board. It does include an extensive laboratory program and requires scientific writing and research. All content is finished by the middle of April so that review time is allotted for the AP exam. All students are required to take the College Board AP exam in biology in May.

Prerequisite: B+ in previous Honors science courses.

## AP Chemistry | Credits: 2.00 | CORE Grades 11, 12

This is a lecture-based course that includes activities, simulations, and problem solving. The content follows the AP curriculum. The laboratory experiments are a mix of both traditional general chemistry experiments and computer simulation labs. The experiments are scheduled to coincide with the lecture material. The laboratory program stresses proper lab technique and safety, and students work in pairs to collect data. Many experiments include use of the Vernier probes and software to acquire and analyze data. Students maintain a lab notebook and submit written reports for each lab; the reports include a pre-lab, procedure, data tables, calculated results, sources of error, and conclusions. In addition to labs on the double blocks of E or F day, students are scheduled for lab blocks on Green days.

Prerequisite: B+ in Honors or B in AP science courses.

#### AP Physics C | Credits: 2.00 | CORE Grade 12

AP Physics is a calculus-based physics course covering mechanics, electricity, and magnetism in rigor and depth. The course follows the College Board recommendations for AP Physics and is intended to be the equivalent of two semesters of university-level Physics. The course includes a hands-on lab component that occurs once every cycle. The fall semester covers Mechanics, and requires familiarity with basic integration and differentiation, algebraic problem-solving, and trigonometry. The spring semester covers Electricity and Magnetism, with a higher level of abstraction and a heavier reliance on calculus ideas and techniques. Inquiry, critical thinking, lab explorations, and clear explanations in oral and written work will be emphasized.

Prerequisite: Students must have earned a B+ in Semester 2 of either AP Chem or Honors Physics; and a B+ in Semester 2 of AP Calc AB.

# AP Environmental Science | Credits: 2.00 | CORE Grades 11, 12

AP Environmental Science is a two-semester course studying the biological, chemical and physical factors of our natural environment and how we can live in and create a more sustainable world. Topics included are nonrenewable and renewable energy types, waste reduction and management, pollution concerns, systems ecology, water and land use, government policy, environmental justice and more. Instruction will be a mixture of lecture, lab activities, small projects and presentations, class discussions and in-class activities. Students taking the class have completed or are completing a sequence involving a full year each of biology, chemistry and physics. At the end of the course, students are required to take the AP Environmental Science exam.

Prerequisite: B in Physics or Honors Physics and department approval.

# Honors Anatomy and Physiology | Credits: 1.00 | CORE Grades 10, 11, 12

In the anatomy and physiology course, the many systems In the Honors Anatomy and Physiology course, the many systems of the human body are evaluated. For each system, students learn the major organs, structures and detailed anatomy coupled with an understanding of cellular physiology. Students are expected to bring to the course an understanding of simple cellular biology from their biology course. It includes a dissection laboratory component to understand the general anatomy and many other laboratories to analyze the physiology of each system. All major body systems are addressed within the context of this course.

Prerequisite: B+ in CP Bio or B in Honors Bio, or B+ in CP or B in Honors of most recent full-year science course

## Electronics | Credits: 1.00 | CORE Grades 11, 12

Electronics is an elective course open to juniors and seniors. This course is divided into four parts:

- 1. Circuit Fundamentals and Home Wiring
- 2. AC Circuits
- 3. Semiconductor Devices and Logic Gates
- 4. Digital Electronics

This course is meant to introduce students to practical applications of electronics beginning with the knowledge and skills to perform basic home wiring repairs and moving to more advanced digital circuitry like that found in digital clocks. Each part of the course will have an overarching practical project with lessons leading up to understanding the components of the project. Students will spend a significant amount of time manipulating electronic components either in the real world or in a virtual simulation environment.

Prerequisites: Must be currently enrolled in or have previously completed a Physics course.

#### Advanced Cancer Research and Analysis | Credits: 2.00 | CORE Grades 11, 12

This course is designed for students interested in the medical field. It consists of three parts; a genetics class, a data analysis class, and an internship with CHOP. Students enrolling in the course commit to all three parts of the course. In the first part of the course, students will learn about the purpose of the D3 b program at CHOP by studying cancer, its causes, and treatments. In the second part, students will learn how to analyze data collected from patients in order to evaluate treatments and disease progression. All parts will include keynote speakers from CHOP, visits to relevant sections of the D3b program, and each semester will culminate in a poster project to be presented at an in-house conference. Over the summer, students will have the opportunity to intern with the D3b program, including shadowing in the hospital setting and research labs, and working on a specific data analysis project.

Prerequisite: B+ or better in Intro to Comp Sci, B+ or better in Honors Biology or AP Biology or Anatomy and Physiology, and department approval.

## Marine Biology | Credits: 1.00 | CORE Grades 10, 11, 12

Marine Biology is a one-semester, elective course open to any student. In this course, we will cover the physical and chemical features of the ocean environment, survey the classification and physiology of the organisms that live there, and discuss the major marine ecosystems and the effect humans are having on them. A range of laboratory activities and demonstrations will provide students with opportunities to learn about the topics in a more detailed, hands-on approach. The course is designed to be a challenging and thorough look at a rarely seen part of the world and is intended for students with a serious interest in biology.

# Forensic Science | Credits: 1.00 | CORE Grades 10, 11, 12

In this course, students will be introduced to mechanisms to critically evaluate collected evidence and expected to draw conclusions about the analysis of that evidence. Simulated crime scene data will be analyzed to learn techniques to evaluate DNA evidence, insect larval evidence, ballistics, fingerprints, blood smear analysis, powders and molecule identification. Laboratory investigations will introduce techniques like blood typing, electrophoresis, fingerprint analysis, blood typing, powder identification, flame testing, insect larval analysis, ballistics, and chromatography of unknown chemicals.

## Food Chemistry | Credits: 1.00 | CORE Grades 11, 12

This course is an opportunity for students to learn about practical applications of chemistry using the context of food and molecular gastronomy. The course deals with the physical and chemical changes that ingredients undergo while being cooked. Students will conduct edible experiments while exploring the science behind various cooking and baking processes. This class is student-centered and project based. Working in groups, students will participate in hands-on activities several times a week, as well as, participating in lectures and discussions related to readings. Students will explore several aspects of cooking methods by preparing food products both in the classroom and at home. Chemistry topics covered include heat transfer, food calorimetry, solubility, fermentation and brining, properties and the importance of numbers and the senses of taste and smell. The important macromolecules of carbohydrates, proteins and fats will be explored chemically and gastronomically. Through this course the student will develop an understanding that they are a chemist every time they cook.

#### Honors Engineering | Credits: 1.00 | CORE Grade 12

Engineering is not simply a science, but rather a way of looking at the world. Honors Engineering I is a collegelevel course that exposes students to the way of thinking required of engineers as well as the career of engineering. Classroom discussions will be used to cover selected engineering-based topics such as material selection and properties as well as both static and dynamic rigid systems. Of equal focus will be for students to harness their critical thinking skills through project-based learning. In this way, students will learn how teamwork is vital to the success of engineers.

Prerequisite: B or better in Honors Physics and/or concurrently enrolled in AP Physics or A in Physics with instructor approval.

## Honors Engineering II | Credits: 1.00 | CORE Grade 12

Honors Engineering II is a continuation of the skills learned and practiced in Honors Engineering I allowing for students to have a full-year college-level introduction to engineering. Classroom topics discussed in this course include statics and dynamics of fluids as well as heat transfer and thermodynamics. As with the first in the sequence, an equal focus will be placed on critical thinking skills and project-based learning in teams. The second in the sequence allows for students to synthesize many topics from both semesters as they solve problems.

Prerequisite: B or better in Honors Physics and/or concurrently enrolled in AP Physics or A in Physics with instructor approval; B in Semester 1 Honors Engineering.

#### Introduction to Astronomy | Credits: 2.00 | CORE Grade 12

Introduction to Astronomy is an elective course open to seniors. This course is one semester long and is divided into four parts:

- 1. Astronomy and the Universe
- 2. Our Planetary System
- 3. Stars and Stellar Evolution
- 4. Galaxies and Cosmology

This course presents a broad view of astronomy, straightforwardly descriptive and without complex mathematics. The absence of sophisticated mathematics, however, in no way prevents discussion of important concepts. Rather, we rely on qualitative reasoning as well as analogies with objects and phenomena familiar to the student, to some degree, this course is the extension of the studying of general science (Methods of Science, Chemistry, Physics) and mathematics (basic Algebra and Geometry). Students will use Stellarium (free open source astronomy software) for most virtual lab activities. in addition to the virtual labs, students will also carry sets of experiments with lenses, spherical mirrors, telescope models and other basic techniques of optics. We will spend one night doing astronomical observations at Mt. Cuba Astronomical Observatory, DE. Students will use information they collect from the observatory to draw conclusions or make inferences to the content of the exercise.

At the end of the course, students will be able to understand the basic concepts of the astronomical study of the universe, the relationship of earth to the universe and also apply the mathematical and physical concepts to the motion of the planetary bodies, such as planets, comets, and stars. They will be more familiar with astronomical instruments, such as telescopes, spectroscopes. They will be more familiar with the life and works of some famous astronomers and scientists such as Copernicus, Galileo, Newton, Brahe, Kepler, Hubble.

This course will help students communicate the excitementthey feel about astronomy and also awaken them to the marvelous universe around us.



# Theology

The Theology Department at Archmere strives to further students' intellectual and spiritual development. While embracing all students in a learning and faith-filled community, the department is grounded in the love of Christ, his Church, and the Catholic theological tradition. By fostering an intellectual and reflective encounter with the sacred mystery of God, the Theology Department intends to inspire students to grow in faith, hope, and charitable love. Finally, through their scholarship, students will be prepared by the department's curricular program for future theological study.

The curriculum of the Theology Department is designed to reflect Archmere's focus on the "education of the whole student." The department's program offers students opportunities to pursue academic excellence, develop a more holistic ethical awareness, serve others, and engage in the practice of faith reflection. This curriculum consists of required courses in Sacred Scripture, the Sacraments, Ethics, and Christian Spirituality. The department's elective offerings allow students to explore more fully the Catholic faith in itself and as it relates to the world around them. Integral to the department's ethos is its focus on the "mind and heart." While considering doctrines and ideas, students are encouraged to see how these pieces fit in their lived experience and how Catholic belief might bear deep meaning for students' lives. Following the example of Saint Norbert, our faculty members are dedicated to the spiritual formation of the Archmere student body so that they will be prepared "for every good work."

#### Exploring Sacred Scripture | Credits: 1.00 | CORE Grade 9

Exploring Sacred Scripture presents the Bible to students as a living source of God's Revelation to us. It includes both Testaments to provide an examination of the seventy-three books of the Bible under the umbrella of Church teaching. This course provides both an opportunity for prayerful study and a survey of the context, message, and authorship of each book. It also affords students with a plan for reading and studying the Bible in communion with the Holy Spirit and Church teaching.

# Encountering Jesus the Christ | Credits: 1.00 | CORE Grade 9

Encountering lesus the Christ attempts to answer the essential questions "who is Jesus of Nazareth?" and "what can we know about Jesus through the study of the New Testament?" This course is a combination of Christology - a complete study of the person and divinity of Jesus Christ - with an overview of the books of the New Testament. Through their study of the Gospels and other New Testament writing students will reflect on the person of lesus and what it means to call oneself a follower of Christ.

# Church and Sacraments | Credits: 1.00 | CORE

A one-semester required course for sophomores that aims to help students see the sacred within the ordinary and appreciate how the Catholic Church and its sacraments celebrate life and put them in touch with God.

#### Christian Ethics | Credits: 1.00 | CORE Grade 10

"How should I act?" "What should I do?" "Who am I to become?" "What is my place in the community?" These questions and more will be addressed in this required sophomore course, Christian Ethics. The class will survey a number of non- and pre-Christian approaches to ethics before moving on to the question of how Christianity in general, and Catholicism in particular, makes a difference to the moral life. In addition to theoretical and conceptual frameworks, the lives of admirable moral witnesses will be considered as formative influences. The course will also utilize real-world examples and situations to think through proper and fitting courses of action for the present-day young adult.

#### Christian Spirituality | Credits: 1.00 | CORE Grade 11

This course will focus on the contributions Christian men and women of faith and zeal have made to the development of Christian spirituality throughout the centuries. It will begin by examining various understandings of spirituality. Then, utilizing James Fowler's Theory of Faith Development, it will provide a foundation for evaluating personal faith development. Following this foundational work, the contributions of various "God-Seekers" including Augustine, Francis of Assisi, Ignatius of Loyola, Martin Luther, John Calvin, as well as Julian of Norwich, Teresa of Avila, Therese of Lisieux and Dorothy Day will be examined to gain an appreciation of their understanding of the Divine. One of the main objectives of the course is for students to reflect on how they resonate or resist the images and understandings of God offered by the life and writings of these noted "God-Seekers" and how their personal faith has developed in recent years.

# Christian Service | Credits: 1.00 | CORE Grades 11, 12

This course is an elective opportunity for juniors and seniors to apply the Christian call to serve others and help create a community inside and outside the school. This is accomplished by actually working at various service sites during the semester. Thirty-five hours of service are required. Group sharing and individual mentoring to process the student's experience are important aspects of the student's growth as a person and a Christian.

# World Religions | Credits: 1.00 | CORE Grades 11, 12

This course will address the fundamental question: How have various religions developed throughout the world and taken root in America? While the course will not be able to investigate all religions of the world, it will sample religious traditions that originated both outside America, such as Judaism, Christianity, and Islam, along with Hinduism and Buddhism, as well as a few that were established in America, such as the Jehovah Witnesses, The Church of Scientology, and The Latter-day Saints (Mormons). Incorporated in this overview will be an investigation what these traditions offer in the way of moral teachings and practices

# Norbertine Spirituality | Credits: 1.00 | CORE Grades 11, 12

This course will explore various aspects of Christian Spirituality with the intention of introducing students to its beauty and impact while hoping they will develop, an understanding and reverence for its offerings. Included will be an investigation of the historical and spiritual contributions of St. Norbert of Xanten and the Norbertine tradition including an exploration of conversion, prayer, devotion and discipleship.

# Faith in History | Credits: 1.00 | CORE Grades 11, 12

Faith in History provides students with an opportunity to explore instances when religion and philosophy became intertwined with world politics, economics, and societal movements throughout history by evaluating primary and secondary sources and engaging in debate and group discussion. Studying the complex, reciprocal relationship between these two disciplines will allow students to gain a better understanding of how their faith affects the world around them, as well as the lens through which they see it. "Awareness of one discipline enables a more informed, nuanced understanding of the other." - U. of Birmingham, UK

#### Social Justice | Credits: 1.00 | CORE Grades 11, 12

Students will discover and understand the seven themes of Catholic Social Teaching (CST) and evaluate these themes through Scripture, the Catechism of the Catholic Church, and other Church documents. Students will apply these principles to contemporary social, economic, political, cultural, and religious issues such as poverty, hunger, human rights, violence, and racism.

# Introduction to Philosophy | Credits: 1.00 | CORE Grades 11, 12

This course will provide students with an introduction to the great pursuit and love of wisdom known as philosophy. By undertaking a study of many of history's great philosophical thinkers, students will garner a grasp of the great debates and manners of thinking that have marked human reflection and thought. Of prime importance will be the study of various conceptions of ethical and moral inquiry. As a result of the course, students will gain a greater ability to reason clearly, especially as regards ethical reflection, through which, it is hoped, they will lead more complete and fulfilled lives.

#### Honors Theology Seminar | Credits: 1.00 | CORE Grades 11, 12

Honors Theology Seminar offers students the opportunity to explore theological and philosophical questions in an academically rigorous environment at the Honors level. Topics read about and discussed will fall under the categories of the True, the Good, and the Beautiful. Students will make a broad consideration of the Catholic theological tradition as it engages the modern world. The small class size and seminar format will prize studentdirected discussion and an atmosphere of collaboration.

Prerequisite: A in both Christian Spirituality and in one additional core Theology course, and department approval.



# **World Languages & Cultures**

Our Mission: Language study is a critical tool in bridging the gap between other individuals and cultures. Our mission is to promote sustained, meaningful communication between all peoples and cultures in an atmosphere of acceptance, understanding and respect. Using a global approach and a commitment to critical thinking, we educate students to be linguistically prepared to effectively communicate in our global society.

**Curriculum:** Each year, more than 90% of our students study one or more world languages. Increasingly, many upperclassmen opt to study an additional world language before graduation. Five levels of French and Spanish, from Introductory to Advanced Placement courses, and five levels of Chinese are offered, along with several culture-focused electives. In order to graduate from Archmere Academy, each student must successfully complete the following: 1) three consecutive years in one World Languages and 2) Level III of one language.

Students who earn a course grade below a C should enroll in summer tutoring. A course grade may improve by no more than one letter; the highest possible grade is a C.

Course Level Placement: We encourage students with prior language study to take language placement tests before enrolling. These tests, offered in May, enable us to evaluate each student's current experience and knowledge to select the course level that best meets his/her needs.

Highly Trained and Immersed Faculty: Our highly experienced teachers and language aide bring a wide range of knowledge and insights to our students. Faculty spend time attending professional conferences and immersion programs, presenting on research and passions, as well as tutoring and organizing school sponsored trips. These trips, both domestic and abroad, offer students first hand experience in the target languages and cultures and enhance our curriculum.

Differentiated Methodology: Meeting the needs of every student: World language classes are taught in the target language using diverse approaches to teach and assess our students. We continuously hone our approaches to meet the varied needs of our learners. Emphasis is placed on communication, both in the classroom and in the global community.

**Cultivating Excellence in World Languages and Cultures:** Archmere has three active chapters of National Language Honor Societies. Students are selected for membership based upon their superior achievement through the third level of study. They are inducted into the Societies at the Honors Convocation in the spring of each year. All students are welcome to participate in Language Club activities held throughout the year. Student representatives organize a variety of cultural events such as annual fundraisers, holiday parties, picnics, dance lessons and diverse culinary experiences. In addition to the aforementioned opportunities, our department boasts two full immersion exchange programs with schools in France and Spain.

# French I | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The first-year language courses stress vocabulary, listening comprehension, and speaking. Grammar is integrated into the conversational aspect of the program. Reading and writing are introduced on a controlled basis. As a result of exposure to target language, cooperative learning situations, interactive activities and the use of technology in the classroom, students are able to communicate in controlled conversational situations. Students read simple passages and respond orally or in writing to comprehension-check questions. Oral and written assessments are included in each unit test. The curriculum also provides opportunities for individual and small group graded oral presentations. Students are exposed to several countries or regions where the language is spoken.

# French II | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The second-year modern language courses continue to emphasize listening comprehension and speaking. Reading and writing skills assume greater emphasis through controlled texts. The four major skills are further developed via the acquisition of vocabulary and the internalization of grammatical patterns. Through the use of the target language, an interactive learning environment, and the use of technology, the students are encouraged to communicate more freely in guided conversation. Further practice is provided through supplemental reading, creative writing and structured paragraphs on topics related to the lesson. With the use of authentic material, students continue to study the history and culture of various countries or regions and to create oral presentations in the target language.

# French III | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The third year modern language courses continue the study of grammar and vocabulary as a means of expanding communication skills. The range of listening comprehension activities is extended. Readings include primary text and cultural topics. Greater emphasis is placed on written communication. All skills are strengthened through exposure to multi-media and technology. As a result the intermediate student is a more sophisticated and independent learner. Level III students deepen their appreciation of culture through individual and group research and presentations.

# Honors French III | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The third year modern language courses continue the study of grammar and vocabulary as a means of expanding communication skills. The range of listening comprehension activities is extended. Readings include

primary text and cultural topics. Greater emphasis is placed on written communication and practical communicative skills. Less emphasis is put on explicit grammar instruction, as grammar is contextualized and integrated into spoken communication. All skills are strengthened through exposure to multi-media and technology. As a result the intermediate student is a more sophisticated and independent learner. Level III students deepen their appreciation of culture through individual and group research and presentations. The Honors courses provide additional opportunities for exploration of literature and culture.

Prerequisite: Department approval and an Ain Intermediate French average prior to enrollment.

# Honors French IV | Credits: 2.00 | CORE Grades 10, 11, 12

Level IV further advances and refines grammar and communicative skills. Acquired knowledge is applied in classroom discussion, presentations, compositions, and readings (cultural, literary, and contemporary). Level IV students are expected to initiate and maintain communication with minimal prompting. They use the target language creatively, applying acquired knowledge and expanding their limits through study of advanced grammar and vocabulary. This course provides students with hands on experience in cultural topics enhanced by multi-media and technology.

Prerequisite: Department approval and an A average in French III or a B+ in Honors French III prior to enrollment.

## AP French | Credits: 2.00 | CORE Grades 11, 12

AP French Language and Culture is a college-level course intended for students with a strong foundation in the target language. The course will be taught exclusively in the target language, in order for students to build upon and hone their proficiency in French speaking, writing, listening and reading. Emphasis will be placed on real world application of the target language, and language as it relates to culture in both contemporary and historical contexts. Students will develop their ability to argue and defend a point of view, specifically through their interaction with authentic sources. Themes will include (but are not limited to) contemporary life, global challenges, aesthetics and science/technology, with an interdisciplinary philosophy at the forefront. Students enrolled in the course must have a strong command of the language, and will be able to draw upon previously learned grammatical concepts and vocabulary to expand their use of the target language. Students must maintain a B average to remain in the AP course.

Prerequisite: Department approval and an A average in S2 Honors French IV prior to enrollment.

# Spanish I | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The first-year language courses stress vocabulary, listening comprehension, and speaking. Grammar is integrated into the conversational aspect of the program. Reading and writing are introduced on a controlled basis. As a result of exposure to target language, cooperative learning situations, interactive activities and the use of technology in the classroom, students are able to communicate in controlled conversational situations. Students read simple passages and respond orally or in writing to comprehension-check questions. Oral and written assessments are included in each unit test. The curriculum also provides opportunities for individual and small group graded oral presentations. Students are exposed to several countries or regions where the language is spoken.

# Spanish II | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The second-year modern language courses continue to emphasize listening comprehension and speaking. Reading and writing skills assume greater emphasis through controlled texts. The four major skills are further developed via the acquisition of vocabulary and the internalization of grammatical patterns. Through the use of the target language, an interactive learning environment, and the use of technology, the students are encouraged to communicate more freely in guided conversation. Further practice is provided through supplemental reading, creative writing and structured paragraphs on topics related to the lesson. With the use of authentic material, students continue to study the history and culture of various countries or regions and to create oral presentations in the target language.

# Spanish III | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The third year modern language courses continue the study of grammar and vocabulary as a means of expanding communication skills. The range of listening comprehension activities is extended. Readings include primary text and cultural topics. Greater emphasis is placed on written communication. All skills are strengthened through exposure to multimedia and technology. As a result the intermediate student is a more sophisticated and independent learner. Level III students deepen their appreciation of culture through individual and group research and presentations.

## Honors Spanish III | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The third year modern language courses continue the study of grammar and vocabulary as a means of expanding communication skills. The range of listening comprehension activities is extended. Readings include primary text and cultural topics. Greater emphasis is placed on written communication and practical communicative skills. Less emphasis is put on explicit grammar instruction, as grammar is contextualized and integrated into spoken communication. All skills are strengthened through exposure to multimedia and technology. As a result the intermediate student is a more sophisticated and independent learner. Level III students deepen their appreciation of culture through individual and group research and presentations. The Honors courses provide additional opportunities for exploration of literature and culture.

Prerequisite: Department approval and an A average in Intermediate Spanish prior to enrollment.

# Spanish IV | Credits: 2.00 | CORE Grades 10, 11, 12

Level IV further advances and refines grammar and communicative skills. Acquired knowledge is applied in classroom discussions, presentations, compositions, and readings. Level IV students are expected to initiate and maintain communication in the target language with minimal prompting. They use the target language creatively, applying acquired knowledge and expanding their limits through the study of advanced grammar and vocabulary. This course provides students with hands-on experience in cultural topics enhanced by multimedia and technology. Students must maintain a C to remain in the Level IV course. Credit will be awarded upon successful completion of each semester.

Prerequisite: Department approval and a B average in Spanish III or a B in Honors Spanish III prior to enrollment.

## Honors Spanish IV | Credits: 2.00 | CORE Grades 10, 11, 12

Level IV further advances and refines grammar and communicative skills as well as exploration of cultures through literature, music, and film. Acquired knowledge is applied in classroom discussion, presentations, compositions, and readings. Level IV students are expected to initiate and maintain communication in the target language with minimal prompting. They use the target language creatively, applying acquired knowledge and expanding their limits through study of advanced grammar and vocabulary. Less emphasis is put on explicit grammar instruction, as grammar is contextualized and integrated into spoken communication. This course provides students with hands-on experience in cultural topics enhanced by multimedia and technology. The honors courses provide additional opportunities for exploration of literature and culture.

Prerequisite: Department approval and an A average in Spanish III or a B+ in Honors Spanish III prior to enrollment.

# AP Spanish | Credits: 2.00 | CORE Grades 11, 12

AP Spanish Language and Culture is a college-level course intended for students with a strong foundation in the target language. The course will be taught exclusively in the target language, in order for students to build upon and hone their proficiency in Spanish speaking, writing, listening and reading. Emphasis will be placed on real world application of the target language, and language as it relates to culture in both contemporary and historical contexts. Students will develop their ability to argue and defend a point of view, specifically through their interaction with authentic sources. Themes will include (but are not limited to) contemporary life, global challenges, aesthetics and science/technology, with an interdisciplinary philosophy at the forefront. Students enrolled in the course must have a strong command of the language, and will be able to draw upon previously learned grammatical concepts and vocabulary to expand their use of the target language. Students must maintain a B average to remain in the AP course.

Prerequisite: Department approval and an A average in S2 Honors Spanish IV prior to enrollment.

# Chinese I | Credits: 2.00 | CORE Grades 9, 10, 11, 12

The first-year language courses stress vocabulary, listening comprehension, and speaking. Students are exposed to approximately 420 Chinese characters and associated phrases, as well as the essential vocabulary and grammar needed to develop proper pronunciation, and listening, reading, and writing skills for basic communication and comprehension. As a result of exposure to the target

language, cooperative learning situations, interactive activities and the use of technology in the classroom, students are able to communicate in controlled conversational situations. Students read simple passages and respond orally or in writing to comprehension-check questions. Oral and written assessments are included in each unit test. The curriculum also provides opportunities for individual and small group graded oral presentations. Students are exposed to several countries or regions where the language is spoken.

# Chinese II | Credits: 2.00 | CORE Grades 10, 11, 12

The second-year modern language courses continue to emphasize listening comprehension and speaking. Reading and writing skills assume greater emphasis through controlled texts. The four major skills are further developed via the acquisition of vocabulary and the internalization of grammatical patterns. Through the use of the target language, an interactive learning environment, and the use of technology, the students are encouraged to communicate more freely in guided conversation. Further practice is provided through supplemental reading, creative writing and structured paragraphs on topics related to the lesson. With the use of authentic material, students continue to study the culture and to create oral presentations in the target language.

# Honors Chinese III | Credits: 2.00 | CORE Grades 10, 11, 12

The third-year language courses continue the study of grammar and vocabulary as a means of expanding communication skills, but at an advanced level. Level III students deepen their appreciation of culture through individual and group research and presentations. The range of listening comprehension activities is extended and greater emphasis is placed on written communication. Students will be required to study and summarize the material related to each unit, in both oral and written forms in Mandarin Chinese. All skills are strengthened through exposure to multi-media, technology, and reading exercises. Readings include Chinese literature, primary text, and cultural topics. As a result, the intermediate student is a more sophisticated and independent learner.

#### Honors Chinese IV | Credits: 2.00 | CORE Grade 12

Honors Level IV further advances and refines grammar and communicative skills. Acquired knowledge is applied in classroom discussion, presentations, compositions, and readings (cultural, literary, and contemporary). Level IV students are expected to initiate and maintain communication with minimal prompting. They use the target language creatively, applying acquired knowledge and expanding their limits through the study of advanced grammar and vocabulary. This course provides students with hands-on experience in cultural topics enhanced by multimedia and technology.

Prerequisite: Department approval and a B average in Chinese III prior to enrollment.

# AP Chinese | Credits: 2.00 | CORE Grades 11, 12

The AP Chinese Language and Culture course is equivalent to an intermediate-level (fourth semester) college/university course in Mandarin Chinese. The course in Mandarin Chinese emphasizes communication (understanding and being understood by others) by applying interpersonal, interpretive, and presentational modes of communication in real-life situations. This includes vocabulary usage, language control, communication strategies, and cultural awareness. The AP Chinese Language and Culture course strives not to overemphasize grammatical accuracy at the expense of communication. The course is taught almost exclusively in Chinese to facilitate the study of language and culture. The AP Chinese Language and Culture course engages students in exploring the culture in both contemporary and historical contexts. The course aligns with ACTFL Culture Standards and develops students' awareness and appreciation of cultural Products, e.g., tools, books, music, laws, conventions, and institutions. Practices, e.g., patterns of social interactions within a culture. Perspective, e.g., values, attitudes, and assumptions.

Prerequisite: Department Approval and an A average in both semesters of either Honors Chinese III or Honors Chinese IV prior to enrollment.

**ELIGIBILITY REQUIREMENT:** Students must maintain a B average to remain in the A.P. course. In order to achieve eligibility for AP Spanish or French, a student must demonstrate a consistent commitment to maintaining the target language, with little to no prompting, in the previous levels. Students who cannot maintain communication in the target language during class will not be considered for the AP level, regardless of their earned grades. Additionally, the student must maintain a consistently strong work ethic both inside and outside class, completing all assigned work in a timely manner and to the best of his/her ability.

## Cultural Perspectives | Credits: 1.00 | CORE Grades 11, 12

How do you learn culture? What makes certain practices taboo and others universal? In Cultural Perspectives, students will use the tools of social anthropologists to discover how language, traditions, greetings, colonization, media, and clothing mirror and transform culture. Through discussion with guest speakers from various continents and critical analysis of films, articles, artifacts, chocolate, and a classic fairy tale, students will emerge with a deeper understanding of their own culture and what it means to be global citizens. This course challenges Auks to discover the realities of studying, working, volunteering and living in an interconnected world. Using the tools they have acquired, students will design a capstone project showcasing their respect, understanding and appreciation for the commonalities and differences that we all share as citizens of the world.

# Cultural Geography | Credits: 1.00 | CORE Grades: 11, 12

Students will discover unique aspects of the different cultural regions of the world with exposure to geography, climate, architecture, clothing, food, language, and more. Through discussion, lecture, analysis of written texts and audio visual materials, map analysis, and taste testing, students will learn to interpret statistics and data in graphic and written form and compare and contrast different elements of cultural expression, including their own cultures. The course will culminate in a presentation of a culture of the student's choice. This course aims to prepare students for every good work by teaching them cross cultural skills, preparing them to interact effectively with people from around the world, and engaging them in higher level thinking/discourse on countries and cultures outside of their own.



# **Health & Driver's Education**

## Health Education | Credits: 1.00 Grades 9, 10

Students at Archmere Academy are required by Delaware State Law to complete four semesters of Health Education (2 credits), which is satisfied during the freshman and sophomore years. Students meet one day per cycle throughout the semester.

Students will explore a variety of social, emotional, and physical health topics while gaining skills, knowledge, and strategies to navigate and balance their personal health needs. The course's topics will be informed by results of the Youth Risk Behavior Survey, administered to the entire student body every other school year; and the course material will be presented through group discussions, guest speakers, and class activities. Subject matter will focus on personal health, substance abuse prevention, disease prevention, fitness, nutrition, bullying prevention, mental health, suicide prevention, Red Cross CPR training, violence prevention and safety, and human sexuality and healthy relationships.

#### **Driver Education | Credits: 1.00** Grades 10, 11, 12

Students will be scheduled for this course based on date of birth and sophomore status. Freshman and juniors are not eligible to take the course as per Delaware regulations. This course consists of two phases: The Classroom Phase, meeting four times per week for eight weeks and The Driving Phase, which consists of twelve "in the car" class hours. This course is offered each semester.

Prerequisite: Any sophomore, junior, or senior may enroll with parental consent.

# **AP Capstone**

Archmere Academy offers special programs to students each year. Among those programs is the AP Capstone, which consists of AP Seminar and AP Research. While AP Seminar is a prerequisite course for AP Research, students are not required to enroll in AP Research after completing AP Seminar.

Regarding AP Seminar, teachers have the flexibility to choose one or more themes that allow for deep exploration based on:

- Concepts or Issues from other AP courses
- Student interests
- Local and/or civic issues
- Global or international topics

The course provides opportunities for you to:

- Thoroughly explore different themes while considering diverse perspectives (e.g., cultural and social, artistic and philosophical, political and historical, environmental, economic, and scientific).
- Analyze a wide variety of source material to gain a rich appreciation and understanding of issues, including: articles; research studies; foundational, literary, and philosophical texts; speeches; broadcasts; personal accounts; artistic works; and performances.
- Work collaboratively with a team to identify, investigate, analyze, and evaluate an academic or real-world problem or issue. Consider options, alternatives, or solutions and develop a multimedia presentation to communicate your conclusion or recommendation.
- Work independently to identify a research question based on provided source material and then research that topic. Analyze, evaluate, and select evidence to develop an argument that you will present and defend. Finally, produce a multimedia presentation delivered to your classmates.

## AP Seminar | Credits: 2.00 | CORE Grades 11, 12

This course will equip you with the skills to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments. You will have the opportunity to explore real-world issues from multiple perspectives and consider varied points of view to develop deep understanding of complex issues and topics in order to make connections between these issues and your everyday life. Gain a rich appreciation and understanding of issues by reading articles, listening to speeches or broadcasts, and experiencing artistic and literary works. The primary goals of the AP Seminar course are to help you understand how to study an issue from multiple perspectives, evaluate source information, and then develop and communicate effectively a logical, evidence-based point of view. You will practice and apply these skills through the exploration of the complex topics and by examining a variety of and often divergent or competing perspectives.

# AP Research | Credits: 2.00 | CORE Grade 12

AP Research, the second course in the AP Capstone experience, allows students to deeply explore an academic topic, problem, issue, or idea of individual interest. Students design, plan, and implement a yearlong investigation to address a research question. Through this inquiry, they further the skills they acquired in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and synthesizing information. Students reflect on their skill development, document their processes, and curate the artifacts of their scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000-5,000 words (accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense.

Prerequisite: Successful completion of AP Seminar and AP Seminar teacher approval.



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