



*Cultivating strong minds and a passionate faith*

# High School Program & Course Description Guide

## **Mount Airy Christian Academy**

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# Mount Airy Christian Academy High School

## Diploma Programs

Mount Airy Christian Academy desires for every high school student to develop to their fullest potential academically. We encourage students to look beyond the minimum requirements for graduation and prepare for college or advanced education. One way we do this is to offer three diploma programs: General, College Preparatory, and Advanced College Preparatory.

### Three Types of Diplomas

#### General Diploma

To receive the General Diploma:

- minimum of 26 total credits including Algebra I, Biology, and one other lab science
- minimum 80 Service Learning hours
- complete a week-long internship in the junior and senior years
- minimum of 2.0 GPA

#### College Preparatory Diploma

To receive the College Preparatory Diploma:

- minimum of 27 credits including Algebra II, Biology, and one other lab science
- minimum 100 Service Learning hours
- complete a week-long internship in the junior and senior years
- minimum of 2.75 GPA

#### Advanced College Preparatory Diploma

To receive the Advanced College Preparatory Diploma:

- minimum of 28 credits including Pre-Calculus, Biology, and one other lab science
- minimum 120 Service Learning hours
- complete a week-long internship in the junior and senior years
- minimum of 3.50 GPA

#### Cumulative Diploma Honors – Recognized at Graduation

*cum laude* = 3.5 GPA\*

*magna cum laude* = 3.7 GPA\*

*summa cum laude* = 3.9 GPA\*

\*Based on a weighted grading scale, not rounded (ex: 85-88 = B; 89-91 = B+; 92-94 = A-; 95-100 = A)

## MACA General Diploma – Requirements for Graduation

<u>COURSES</u>	<u>CREDITS</u>	<u>REQUIRED COURSES</u>
Bible	4	(Hermeneutics & Christology)
English	4	
Social Studies	3	(World History, US History, American Government)
Math	4	(Algebra I, Geometry) 1 credit each year
Science	3	(Biology + at least one other lab science)
Foreign Language	2	
Physical Education	1	(Achievable through MACA sports)
Health	½	
Technology Education	1	(Computer Science I)
Fine Arts	1	
Communication	½	
Electives	2	(can be additional core courses)
TOTAL	Minimum of 26 credits required for graduation	

Students must earn a minimum of 26 credits, participate in the MACA internship in their junior and senior years, earn a minimum of 80 Service Learning hours, graduate with at least a 2.0 overall GPA and successfully complete their Senior Bible Thesis Presentation to be awarded a General Diploma.

These requirements meet or exceed the standards established by the Maryland State Department of Education.

# Mount Airy Christian Academy High School Course Prerequisites & Recommended Course of Study

## Course Prerequisites

Some of the courses within the curriculum require that students successfully complete the preceding course with at least a "C" average. This is to assure success in the next level of learning. Therefore, to enter the next level course, a student must have a "C" final average grade or receive approval from the advanced course teacher.

<u>Advanced Course</u>	<u>Prerequisite Course(s)</u>
Computer II	Computer I
Web Design and Development	Computer I and Teacher Approval
IT Assistant	Computer I <u>and</u> Teacher Approval
Spanish IV	Spanish III
Spanish III	Spanish II
Spanish II	Spanish I
Algebra I	Pre-Algebra
Geometry, Algebra II	Algebra I
Pre-Calculus	Algebra II
AP Calculus	Pre-Calculus
Physics - H	Algebra I & II; enrolled in Pre-Calculus and/or teacher approval (85 or higher)
Anatomy & Physiology -	Biology (85 or higher)
Chemistry	Biology, Algebra I; enrolled in Algebra II
Biology	Integrated Physics & Chemistry or teacher approval (if enrolled in Algebra I)

## **Recommended Course of Study**

### Ninth Grade

Old Testament Survey  
Classic Lit, Grammar & Composition  
Introduction to Algebra I/Algebra I/Geometry  
World History  
Computer I/Spanish I  
Integrated P & C or Biology\* (teacher recommendation)  
Elective

### Tenth Grade

New Testament Survey  
Literary Genres & Composition  
US History  
Algebra I/Geometry/Algebra II  
Biology/Chemistry  
Spanish I/II or Computer I/II  
Elective

### Eleventh Grade

Comparative Religions  
American Lit & Composition  
American Government  
Geometry/Algebra II/Pre-Calculus/Pre-Calc  
Chemistry/Anatomy & Physiology - H  
Computer I/II or Spanish I/II/  
Elective

### Twelfth Grade

Hermeneutics & Christology  
British Lit & Composition  
Algebra II /Pre-Calculus/Calculus/Consumer Math  
/Statistics  
Chemistry/Anatomy & Physiology - H/Physics - H  
Elective  
Elective

### Sample 9

OT Survey  
Class Lit, Gram & Comp  
Algebra I/Geom.  
World History  
Computer I  
Integrated P & C/Biology  
Health/elective

### Sample 10

NT Survey  
Lit Genres & Comp  
US History  
Geometry/Algebra II  
Biology/Chem.  
Spanish I  
Fine Art

### Sample 11

Comparative Religions  
Amer. Lit & Comp  
American Gov't  
Algebra II/Pre-Calc  
Chemistry/Physics - H  
Spanish II  
SAT Prep

### Sample 12

Herm & Christology  
Brit Lit & Comp  
Pre-Calc/Calc/Stats/Cons Ma  
  
Anat & Phys - H  
Computer II/Symbolic Art/Music Apprec  
Elective

# **HONORS/ACCELERATED PROGRAM**

In an effort to encourage our students to take demanding advanced academic work and to provide them with coursework that enables them to be more competitive in their future academic pursuits, Mt. Airy Christian Academy offers honor courses for grades 9-12 and accelerated courses in English and Math for grades 6-8. The grading standard for honors is very rigid. Students taking honors courses are expected to spend considerably more time in preparation outside of class. Honors courses are weighted higher than regular classes in regards to G.P.A. On an honors scale, an A is = 5 points, B = 4 points, C = 3 points, D = 2 points and F=0 points.

## **ENTRANCE REQUIREMENTS FOR HONORS COURSES**

### **GRADES 9-12**

- Student must have a minimum 3.0 GPA (Middle school students must carry a B or above to be eligible for entering a freshmen level honors class).
- Student must be recommended for advanced courses from their prior teacher of the subject area they are seeking to enter as an honors student.
- Students seeking acceptance into honors English may be asked to present a writing sample (minimum of 2 paragraphs demonstrating proper grammar and writing ability).
- Students within honors class must maintain a 3.0 average in order to continue in the program. Students failing to meet the requirement will be moved to the regular class status in any class where they fall under a 3.0 average.

## College Level Education Opportunities

### MACA's *Next Step* Program

MACA's *Next Step* Program offers college-level courses taken on the MACA campus during a student's junior and/or senior year. *Next Step* courses are taught by qualified Christian instructors approved as adjunct professors by Lancaster Bible College (LBC). These courses count toward high school requirements while also providing college credit through LBC. These credits may be transferred to other colleges and universities according to each college's transfer process. Students eligible to enroll in these courses must be MACA seniors with a GPA of 2.50 or higher on a 4.00 scale. Current courses offered through the MACA *Next Step* Program include:

LAN 101 – English Composition

LAN 104 – Public Speaking

HIS 201 – U.S. History (1600-1877)

BUS 102 – Introduction to Business

CHEM 101 – Intro to Chemistry

BIB 103 – Creation & Covenants: OT I

BIB 104 - Israel's Life & Literature: OT II

BIB 105 – Biblical Hermeneutics

### Off Campus/Dual Enrollment College Credit

- Twelfth grade students will be given the opportunity to take dual credit courses through other approved institutions.
- To be eligible for this, students must maintain a 3.0 GPA at MACA.
- Students must be on the MACA campus for at least five classes a day and must attend chapel weekly.
- Students will be eligible to play sports at MACA as long as they meet the above requirements, and they must be present for seven classes per day to be eligible for a student government or class officer position.
- The off-campus classes must be from an accredited college and must be approved by the Academic Dean.
- College classes cannot hinder a student from going on events like the retreat.
- College credits must be for classes that are not offered at MACA
- Dual credits will show on MACA transcripts as transfer credits.
- Students taking dual credits must maintain a 3.0 GPA.



# Mount Airy Christian Academy High School Course Description Guide

In order to provide the best educational materials possible, MACA's administration and staff review the curriculum constantly. As a result, all materials are subject to change. Course offerings are based on available faculty and adequate enrollment. Courses which do not meet minimum enrollment requirements will be cancelled.

## **Bible Department**

### **Bible Basics - (1 credit)**

This course is intended for students who are new to studying the Bible. There will be an overall survey of the Bible, as well as instruction on how to study the Scriptures.

### **HS Bible 9 – Old Testament Survey - (1 credit)**

This survey course is intended to give students an overview of each of the 39 books of the Old Testament. The study of the Old Testament will allow students to evaluate the differing views of God held by different Christian denominations as well as Jews, Muslims, atheists and many other worldviews who encounter the texts of the ancient Hebrews. The course is structured to examine the books of the Hebrew Scriptures from an historical, literary and spiritual perspective. The History of the ancient near east and northern Africa provides the backdrop for the literary genres of ancient narrative, suzerain-vassal treaties, prophetic and apocalyptic messages as well as ancient law codes, ancient Hebrew poetry and historical documentation. This course is focused on helping students reflect on the meta-narrative of progressive revelation as the writings of the Hebrew people develop a messianic expectation into the rise of the Roman Empire.

### **HS Bible 10 – New Testament Survey - (1 credit)**

This survey course is intended to give students an overview of each of the 27 books of the New Testament. The study of the New Testament will allow students to evaluate the differing views of God held by different Christian denominations as well as Jews, Muslims, atheists and many other worldviews whose histories are intertwined with Christianity. The course is structured to examine the ancient texts of the koine Greek scriptures from an historical, literary and spiritual perspective. The History of the Hebrew people and the Roman Empire provide the backdrop for the literary genres of ancient biography, biographical theology, epistolary homily, pastoral epistles and apocalyptic messages as well as historical documentation. This course is focused on helping students reflect on the meta-narrative of progressive revelation as the writings of the followers of Jesus of Nazareth reflect the thinking and life situations of Christians in the 1st century AD.

**HS Bible 11 – Comparative Religions** - (1 credit) Summit Ministries' *Understanding the Times*

The goal of this class is to help students recognize the significance of some of the most influential ideas and values prevalent in our culture and to understand the assumptions about reality from which they arise. Students will compare and contrast Christianity, Islam, Secular Humanism, Marxism-Leninism, New Age (Eastern religions), and Postmodernism. Students will read from and listen to proponents of these various views in order to accurately understand their beliefs. Throughout this course students will compare and contrast these different religious views in the disciplines of theology, philosophy, ethics, biology, psychology, sociology, law, politics, economics, and history.

**HS Bible 12 – Christology & Senior Thesis Preparation** - (1/2 credit) (Seniors only, one semester course)

The student will also examine the person of Jesus Christ and his Work. Students will write a 9-18 page Senior Thesis articulating and defending their faith. This assignment will merge factual knowledge gained with reasoning skills developed into a final synthesis, involving both written and oral presentation. **This class is required for graduation.**

**BIB 105 – Biblical Hermeneutics** – (1 HS credit, 3 college credits) (Seniors Only, one semester course) Dual Enrollment College Credit Course for Qualifying Students

This course is an introduction to the principles and practice of interpreting the Bible using the historical-grammatical-rhetorical method of interpretation. The course introduces students to key principles related to this method and then provides guidelines for applying these principles to determine the author's originally intended meaning. Students learn how to integrate electronic tools into the process. The course concludes with suggestions on how to determine the relevance of these original thoughts to our own lives. **This course is required for graduation.**

**BIB 103 – Creation & Covenants: OT I** – (1 HS credit, 3 college credits) (Seniors Only, one semester course) Dual Enrollment College Credit Course for Qualifying Students

This course surveys the books of the Pentateuch placing special emphasis on biblical beginnings and the development of the covenants as foundational for God's working in the rest of Scripture. Attention is given to background matters and critical and theological issues.

**BIB 104 – Israel's Life & Literature: OT II** – (1 HS credit, 3 college credits) (Seniors Only, one semester course) Dual Enrollment College Credit Course for Qualifying Students

This course surveys the Historical books of the Old Testament from Joshua to Esther. Visibility is given to the poetic and prophetic books as they intersect Israel's history. Attention is given to background matters and critical and theological issues.

**Independent Study** - (1 credit; *Juniors and Seniors only – teacher pre-approval required*)

A student may explore a specialized area of Biblical studies under the direction of a Bible teacher.

## **English Department**

### **High School English**

A research paper will be required every year for each high school grade.

**Classic Literature, Grammar and Composition** – (English 9) - (1 credit) BJU Press and various novels

This course focuses on a variety of genres from different time periods to illustrate the breadth and depth of literature. Students investigate different literary devices and learn to apply them in their own writing. They learn to master the writing process through a variety of compositions, including short stories, essays, and journals. The course emphasizes proper essay format and correct use of citations, especially during the research essay unit. Students also learn vocabulary, sentence clarity, and grammar and punctuation rules, particularly as applied to their writing. In the novel units, the students are introduced to Eliot, Shakespeare, Verne, Wells, and others.

**Literary Genres and Composition** (English 9 Honors/English 10) - (1 credit) Various sources

With a theme of “write for your audience,” this year’s class focuses on the impact of different types of writing on the audience. Students read a variety of works including *Uncle Tom’s Cabin*, *Night*, *Henry V*, and *Lord of the Flies*, among others. They learn to apply literary analysis skills and develop a basic understanding of how worldviews are expressed in literature. The class includes special units on propaganda and advertising, as well as research paper writing. Students participate in several group projects and develop oral communication skills through presentations. Additionally, they develop writing clarity through work with modifiers, active voice, and parallel construction.

**American Literature and Composition** (English 10 Honors/English 11) – (1 credit) Various sources

Students taking this course will develop their oral and written communication skills through various presentations/debates/compositions based upon both individual and collective research and critique of literary works. The course incorporates thorough analysis of various literary themes and tools found in American works such as *The Scarlet Letter*, *The Great Gatsby*, *Huckleberry Finn*, *To Kill a Mockingbird*, and *Fahrenheit 451*.

**British Literature and Composition** (English 12) – (1 credit) Various sources

Students taking this course will master the writing process using smaller compositions as well as an extensive, detailed thesis project corresponding with the Senior Bible course. The student will develop his oral communication skills through various presentations based upon research, analysis, and critique of literary works. Those literary works encompass a timeline study of British literature and history covering such pieces as *Beowulf*, *Canterbury Tales*, *Othello*, *Paradise Lost*, *Rime of the Ancient*

*Mariner, The Importance of Being Earnest, and The Screwtape Letters.* Additional writers include Jonathan Swift, Alfred Lord Tennyson, The Brownings, and several modern writers.

**LAN 101 – English Composition - (1 HS credit, 3 college credits) (Seniors Only, one semester course)**  
Dual Enrollment College Credit Course for Qualifying Students

Students are introduced to the expectations and mechanics of academic writing. Through actively engaging in the research process, students discover and focus on a central idea, which they will support through a critical reading and *synthesis* of sources. This will enable the student to produce organized, supported, audience-driven persuasive academic papers reflecting an awareness of the power of language to shape cultural perceptions and communicate a biblical worldview. A grade of C- or better is necessary for students to move on to fulfill their writing intensive course requirement. This course will transfer to many colleges and universities as the English Composition course required for most two and four year degrees.

**Independent Study - (1 credit; Juniors and Seniors only – teacher pre-approval required)**

A student may explore a specialized area of English under the direction of an English teacher.

**Foreign Language Department**

**Spanish I - (1 credit) McDougal Littell’s *Avancemos I***

Since this is a beginning course in Spanish, students are taught to speak, read, and write simple Spanish. Students will begin training their ear to hear and interpret short Spanish passages. Vocabulary and grammar are stressed. Simple grammar such as articles, noun-adjective agreement, present tense, and simple preterit are taught. Some time is spent on Spanish culture.

**Spanish II - (1 credit) McDougal Littell’s *Avancemos II***

Prerequisite - Spanish I

This course has its emphasis on listening comprehension, speaking, and writing. The student will learn the present, preterit, imperfect, present progressive, subjunctive, and future tenses. The student will move beyond the basics of sentence structure and learn the subject and verb complements in depth. The last objective is to teach the student to integrate language and culture as one whole. This will enable the student to visualize the Hispanic as people in need of salvation, not people strange and remote from them.

**Greek I, II, III, IV – (1 credit each) Essentials of New Testament Greek by Ray Summers and Thomas Sawyer, study guide by Stephen Cox**

Prerequisite – Teacher approval

An elementary study of the vocabulary, forms, and basic grammar of the Greek New Testament. Students will translate simple sentences into Greek and more advanced sentences from Greek to English to reinforce instruction.

Course justification: The authors of the Bible were inspired in three languages: in the Old Testament, Hebrew and Aramaic; in the New Testament, Greek. Today, numerous translations and interpretations are available. The only way one can adequately judge the accuracy and value of these is through knowledge of the original languages.

**Independent Study** - (1 credit; *Juniors and Seniors only – teacher pre-approval required*)

A student may explore a specialized area of language studies under the direction of a language teacher.

## **Mathematics Department**

**Pre-Algebra** - (1 credit) McDougal-Littell's *Pre-Algebra*

This is a pre-algebra class designed to focus on fundamental algebraic problem solving as well as review in fractions, decimals, ratio, percent, exponents, and basic geometry. This is a preparation for Algebra I.

**Algebra I** - (1 credit, Honors and Regular) Houghton, Mifflin, Harcourt *Algebra I*

Prerequisite - "C" minimum average in Pre-Algebra or a teacher's recommendation

This course covers equations, inequalities, functions, systems, and exponents. Problem solving is emphasized through linear equations, polynomials, factorings, and quadratic equations. Students will learn to think both inductively and deductively. **This course is required for graduation.**

**Geometry** - (1 credit, Honors and Regular) Houghton, Mifflin, Harcourt *Geometry*

Prerequisite - Algebra I

Geometry will cover the fundamentals of two-column proofs using theorems and postulates with an emphasis on reasoning skills. Students are introduced to parallel and perpendicular lines, triangle congruence, and properties and attributes of triangles, polygons, quadrilaterals and circles. Reasoning skills and problem solving are emphasized using trigonometry, transformational geometry, and spatial reasoning. **This course is required for graduation.**

**Algebra II** - (1 credit, Honors and Regular) Holt-McDougal's *Algebra II*, Houghton Mifflin Harcourt

Prerequisite - Algebra I, Geometry

Algebra II represents an overview of Algebra I at the beginning of the course. The concepts of relations and functions will be applied to the coordinate plane. Students will learn simplifying and factoring of polynomials using the FOIL method and binomial expansion which will be used later in other classes. An introduction to conics, trigonometric functions, irregular areas, logarithmic functions, and statistics will be covered briefly. The order found in mathematics exists because of the God who created an orderly universe. This course includes practice and preparation for college entrance exams

**SAT Prep** – (1 credit) Amsco's Preparing for the SAT Mathematics Amsco School Publications,

Prerequisite – Geometry OR Teacher Approval

SAT Prep provides a complete review of topics covered in the mathematics portion of the SAT, including the new Level 2 topics that will debut on the 2016 test. Mathematic sections of the SAT focus on a student's reasoning and problem-solving skills in four basic categories: Arithmetic-Numbers and Operations, Algebra and Functions, Geometry and Measurement, and Number Patterns, Probability, Statistics, and Data Analysis. The newer levels will focus on real-world contexts. SAT Prep is a P/F class.

**Statistics** – (1 credit, *Juniors and Seniors Only*) Understandable Statistics Brase/Brase Houghton Mifflin

Prerequisite – Algebra II OR Teacher Approval

We live in the information age: we are bombarded with information daily, much of it statistical. Statistics provides a useful tool for understanding and evaluating this information. To achieve this goal, this course will cover a full range of necessary skills from organizing data, measures of central tendency and variation, probability, distributions, estimation, and hypothesis testing.

**Pre-Calculus** - (1 credit, Honors) McDougal-Littell's *Pre-Calculus*

Prerequisites - Algebra I, Algebra II, and Geometry

Advanced mathematical concepts expand on topics from intermediate algebra; these are developed thoroughly to ensure understanding. Plentiful examples develop concepts within a clear, concise format. Students learn key skills through annotated examples, chapter reviews, tests, and exercises. Selected answers help students check their own progress. The content includes linear relations and functions, theory of equations, matrices and vectors, the circular functions, the trigonometric functions, sequences and series, polar coordinates and complex numbers, conics, probability, and descriptive statistics. This course includes practice and preparation for college entrance exams.

**AP Calculus AB** - (1 credit, Honors) Holt-McDougal's *Calculus: An Applied Approach*

Prerequisite – Pre Calculus

AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students learn how to use technology to help solve problems, experiment, interpret results, and support conclusions. Students who desire to enroll in the AP Calculus AB test given at the end of the year can qualify for college credit based on their test score.

**Consumer Math** - (1 credit, *Juniors and Seniors only*) BJU Press' *Consumer Math*

This course is designed to help students develop competency in a variety of mathematical concepts.

Developing thinking and reasoning skills and problem-solving abilities. Real world problems will be investigated using algebraic, graphic, and numerical techniques. Topics include credit cards, energy costs, mortgages, investments, savings, health, accident and homeowner's insurance, and more.

**Independent Study** - (1 credit; *Juniors and Seniors only – teacher pre-approval required*)

A student may explore a specialized area of mathematical studies under the direction of a math teacher.

## **Physical Education Department**

Students in grades 9-12 who have not obtained a P.E. credit will be given preference for P.E. classes. High school students do not need to participate in P.E. classes if they participate in at least two MACA sports. The coaches will provide students with P.E. grades. Each MACA sport earns 1/2 credit towards P.E. with a limit of one credit total.

**Physical Education** - (1 credit required; courses in ½ credit increments)

This course is designed to improve the student's cardiorespiratory development through vigorous practice and competitive participation. The student will develop an appreciation for the rules, knowledge, and strategies of several team and individual sports. An effort will be made to help the student develop Christian sportsmanship through self-control, fair play, group interaction, and cooperation.

**Health** - (1/2 credit)

Taught from a Christian perspective, this course is designed to provide high school students with an understanding of the basic needs of the human body. It will help students care for themselves physically, emotionally, socially, and spiritually.

**Independent Study** - (1 credit; *Juniors and Seniors only – teacher pre-approval required*)

A student may explore a specialized area of Physical Education studies under the direction of a PE teacher.

## **Science Department**

**Integrated Physics & Chemistry** - (1 credit) BJU Press Physical Science

The purpose of this course is to give students a beginning knowledge of physical science. In this course, a student will be exposed to physics and chemistry concepts. This course provides a quality foundation as well as developing laboratory skills for students who will take biology, chemistry, and physics.

**Biology** - (1 credit) BJU Press' *Biology A and B*

Prerequisite – Integrated Physics & Chemistry, passage of the Biology entrance exam, or teacher recommendation

Students will investigate biology at a molecular, cellular and macrobiological level through hands-on demonstrations, lab activities and various research projects. This includes information on the attributes of life, basic biochemistry, major metabolic process (photosynthesis, respiration, etc.), genetics and classification. The second half of the course is spent exploring the various living organisms in the kingdoms including bacteria, protists, fungi, plants and animals. Students will become familiar with the scientific process as well as learn good research and science writing habits. **This course is required for graduation.**

**Chemistry** - (1 credit) BJU Press' *Chemistry*

Prerequisites - Algebra I and Biology; enrolled concurrently in Algebra II or completed or teacher recommendation

Students will investigate various facets of chemistry through hands-on demonstrations, lab activities and various research projects. They will also learn an appreciation for the history of chemistry and chemical research by examining the development of the atomic model and the Periodic Table. Topics in this course include, but are not limited to, unit analysis (the mole), stoichiometry, gas laws, solutions and acid/base chemistry.

**Anatomy & Physiology** - (1 credit, Honors) Elsevier Mosby's *The Human Body in Health and Disease*

Prerequisite – 85 or higher in Biology and/or teacher recommendation

Students will develop an understanding of the function of the human body as a whole by examining the various organ systems that make it up. For each system, the anatomical structures will be studied, but the physiological function of those structures will also be explored by examining the various disorders and diseases associated with these organ systems. Students will gain some hands-on experience with anatomical structures through dissection and procedures, such as measuring blood pressure.

**Physics** - (1 credit, Honors) BJU Press' *Physics*

Prerequisites – 85 or higher in Biology and Algebra II; enrolled concurrently in Pre-Calculus or completed Pre-Calculus; or teacher recommendation

Students will study the fundamental laws of physics through a math based practical application of physics to real-world problems. The course includes hands-on demonstrations, lab activities and various research projects so that students can gain a more independent approach to the design of scientific research projects. Topics covered in this course include kinematics, dynamics, Newton's laws, work, power and a variety of others. Unlike the Integrated Chemistry and Physics class offered, this course goes beyond the fundamental concepts of physics.



**Forensic Science** - (½ credit, one semester, *Juniors and Seniors only*) This course surveys key topics in forensic science, including the application of the scientific process to forensic analysis, procedures and principles of crime scene investigation, physical and trace evidence, and the law and courtroom procedures from the perspective of the forensic scientist. Students will learn about forensic tools, technical resources, forming and testing hypotheses, proper data collection, and responsible conclusions.

**The Great Outdoors: Maryland Ecology and the Chesapeake Bay** - (½ credit, one semester, *Juniors and Seniors only*) Students will explore the ecology of the state of Maryland by looking at the populations and communities that make it up, including native plant and animal species, invasive species and human conservation efforts. Emphasis will be placed on the ecosystems of the Chesapeake Bay. The class will include field trips to sites like Cunningham Falls, Sandy Point State Park, and Potomac River Sites.

**CHEM 101 - Introduction to Chemistry** - (1 HS credit, 3 college credits) (one semester course) Dual Enrollment College Credit Course for Qualifying Students

This course involves study of: matter and measurement, atoms and elements, molecules and compounds, chemical reactions, stoichiometry, gases, thermochemistry, solutions, models of the atom, atomic structure, periodic properties, chemical bonding, molecular structure, shape and polarity, intermolecular forces, and acids and bases. The course is designed mainly for science majors and pre-professional students. Laboratory experiments require students to collect, analyze, and interpret data in order to identify properties and/or unknown substances; guided inquiry labs will require students to design and perform experiments.

**Independent Study** - (1/2 credit per semester; *Juniors and Seniors only – teacher pre-approval required*)

A student may explore a specialized area of science under the direction of a Science instructor.

### **Social Studies Department**

**American Government** - (1 credit) BJU Press' *American Government, A Christian Manifesto, The 5000 Year Leap, and We Still Hold These Truths (to be requested for 2017-18)*

The students will learn of the men who founded our nation, the biblical, natural rights foundation upon which our country was established, the founding documents, the structure and outworking of our government on the federal, state, and local level, the elective process, the history of and lessons derived from the Civil Rights Movement, how our government compares to other governments throughout history, and the keys to good government and responsible Christian citizenship. Students will also take an in-depth look at current issues and apply Biblical and Constitutional truth to them, developing research and critical thinking skills in the process. **This course is required for graduation.**

### **World History** - (1 credit) BJU Press' *World History*

This student will examine the rise of civilization from a biblical worldview perspective . The students will study the purpose and nature of historical research, ancient civilizations, the Greco-Roman empires and the emergence of western civilization, the rise of Christianity and Islam, the medieval period, the dominance of the Roman Catholic during the Middle Ages, the Reformation, and the Renaissance. The Age of Discovery and Enlightenment will also be studied so as to gain an understanding of the establishment and importance of the modern world, the New World, leading into the American founding. **This course is required for graduation.**

### **U.S. History** - (1 credit) BJU Press' *U.S. History*

The course of study will cover the history of the United States from the antebellum period and the Civil War through to the present day. An emphasis will be placed on understanding the lessons of our history and the impact of our Christian heritage throughout. Attention will be given to the forces leading to the Civil War, Reconstruction, the Gilded Age and Progressive eras, the Great Depression, the involvement of the United States in the two world wars, the Cold War, the 1960's, and the rise of modern America, beginning and ending with the events of September 11, 2001. **This course is required for graduation.**

### **HIS 201 – U.S. History I (1600-1877)** – (1 HS credit, 3 college credits) (Seniors Only, one semester course) Dual Enrollment College Credit Course for Qualifying Students

America traces its national existence back to a European experiment that had many different purposes from economic enterprise to religious utopianism. This class will trace the history of the United States from its founding through its revolution of independence to its near collapse in the Civil War. Following a chronological scheme, students will focus on the persistent themes in American society, economics, and politics in addition to recognizing the innovation associated with America's growth. This course will transfer to many colleges and universities as part of general studies requirements. **This course may be used to meet the Maryland US History course requirement for graduation.**

### **Independent Study** - (1 credit; *Juniors and Seniors only – teacher pre-approval required*)

A student may explore a specialized area of social studies under the direction of a social studies teacher.

## **Technology Department**

### **Computer Science 1** (1 credit)

Geared primarily towards providing high school students with the foundational skills necessary for success in MACA's digitally enhanced learning environment. Students will develop advanced word processing, presentation, and spreadsheet skills, as well as intermediate website development and graphic design skills. Students will learn "digital citizenship" principles while using social media tools including Blogger, Twitter, and Google+, and will begin developing a digital portfolio and "positive

digital footprint” using online tools such as LinkedIn.

**Computer Science 2** (1 credit)

Prerequisite: Computer 1

Geared primarily towards preparing students for life after graduation from MACA. An emphasis is placed on becoming a highly adaptable user of technology who is able to intuitively develop and apply solutions in various known and unknown scenarios using cloud/web based tools. Students will develop advanced website development, graphic design, and project management skills, as well as basic programming skills. Students will continue to build on their digital portfolio and “positive digital footprint” using social media tools including Blogger, Twitter, and Google+, for the purpose of positioning themselves for college and career opportunities. Prerequisite: Computer Science 1

**Technology Assistant (IT)** - (1 credit)

Prerequisite: Computer I and teacher approval

A technology assistant works within classrooms during an assigned class period as a trouble-shooter for technology-based issues. The assignments will be given by the Technology Manager. The IT will focus on iPad questions and concerns for both staff members and fellow students. The IT will also work on application downloads, updates, and other maintenance items. All candidates must be interviewed and pre-approved by the Technology Manager.

**Independent Study** - (1 credit; *Juniors and Seniors only – teacher pre-approval required*)

A student may explore a specialized area of technology studies under the direction of a technology teacher.

## **High School Electives and Education Enrichment Program (EEP) Classes**

Electives are offered according to student demand, teacher availability, and scheduling accommodations. Students must earn at least one credit in Fine Arts and one-half credit in Health to graduate. Electives and EEP classes run on a semester basis. **MACA reserves the right to not offer an elective if there is not sufficient interest.**

### **Fine Arts Electives**

#### **HS Studio Art - (1 credit)**

Studio art is designed to give the students experience with a variety of media, as well as exposure to the major movements in the field of art. Students will learn to create with the elements of art (line, shape, color, value, texture, space, and form), as well as demonstrate a knowledge and appreciation of art styles and composition

#### **HS Band – (1 credit)**

Students learn the techniques of playing instruments, working to develop ensemble and solo performances. Tonal quality and technical facility are developed. Students discuss and constructively comment on their own performances and on the performances of the band. Students will be asked to perform outside of normal class hours for programs and chapels. **This is a combined middle school high school/course.**

#### **Journalism – (1 credit)**

(Logistics of Journalism) This course is designed for students interested in journalism and developing their skills as a writer. The course explores various topics including the "nuts and bolts" of reporting and writing, content issues, ethical responsibility, interviewing skills and basic vocabulary. Students will learn the fundamentals of news, feature, editorial and sports writing. Students will create a variety original stories using differing structures and writing techniques. Students will also collaborate to publish a monthly school newspaper.

#### **Yearbook – (1 credit)**

In this course, students will gain skills in one or more of the following areas: design, advanced publishing techniques, copywriting, editing and photography while producing a creative, innovative yearbook which records school memories and events. There is an emphasis on journalism skills in this class. Participants gain useful, real world skills in time management, marketing, teamwork and design principles.

#### **Music Appreciation - (.60 credits)**

This course introduces students to the history, theory, and genres of music. The course explores the

history of music, from the surviving examples of rudimentary musical forms through to contemporary pieces from around the world. The first semester covers early musical forms, classical music, and American jazz. The second semester presents modern traditions, including gospel, folk, soul, blues, Latin rhythms, rock and roll, and hip hop. The course explores the relationship between music and social movements and reveals how the emergent global society and the prominence of the Internet are making musical forms more accessible worldwide.

**Vocal Ensemble - (.40 credits)**

The purpose of this course is to give students the opportunity to develop basic performance techniques in a small ensemble setting through the study of varied ensemble literature. Emphasis will be placed on reading music, developing a skill in individual vocal ranges, blending with other singers, and singing in harmony.

**Art: Symbolism and Metaphor - (1 credit)**

This course will examine and explore not only the history of symbolism and metaphor in art from the past but also what can be interpreted as modern symbolism. Students will begin to establish their own symbolic iconography. The ultimate goal is that by establishing a “language” the student can express his/her own personal visual narrative. Students will have the opportunity to create their personal art portfolio.

**Exploring Literature 1 - (½ credit)**

Students will join this book review class as a means to enrich their knowledge and understanding of literature. In-class reading and purposeful discussion will compose a large portion of this class.

**Exploring Literature 2 - (½ credit)**

Students will join this book review class as a means to enrich their knowledge and understanding of literature. In-class reading and purposeful discussion will compose a large portion of this class>

**Other Electives**

**Communication - (1/2 credit)**

Communication is a one semester course which includes discussions of the communication process, audience analysis and public speaking guidelines. Students demonstrate the assimilation of these abilities through specific exercises, written assignments, group activities, speech performances, constructive criticism, and practice cases. Speaking projects include introductions, interviews, demonstration speeches, declamations, informative speeches, devotional speeches, and persuasive speeches. **This course is required for graduation.**

**STEM Elective - (1 credit)**

Inspired by the nationwide attention on science, technology, engineering, and math education, the result has been the creation of a unique course, simply called STEM. Students attend STEM in addition to their regular science and math classes. The STEM course, however, is not an add-on math, science, or technology course. The goal of STEM is to foster a learning environment in which students are guided to produce original ideas, objects, and structures according to certain specifications using concepts and skills from math, science, and technology. Although students make the math, science, and technology connections, those are still not the main focus of the course. Rather, the mission of the course is to grow students' capacity for creativity and back-loaded learning in a STEM context.

**College and Career Preparedness - (½ credit, 1 semester, fall only) (Seniors only)**

The College and Career Preparation course presents a unique opportunity for seniors to have the resources and assistance they need in order to successfully navigate the challenges of exploring careers and majors, the college search process, applying to colleges, application essay writing, investigating ways to finance college, college/campus life and job application skills (cover letters, resumes, and interviewing). The goal of the course is to provide instruction in topics that will be most practical and helpful to the student's senior-year needs and transition beyond MACA. Grading of the course will come from engaging in classroom projects/activities, meeting deadlines, completing practical assignments, and taking tests and quizzes.

**LAN 104 – Public Speaking - (1 credit, 3 LBC college credits ) (Seniors Only, one semester course)**

Dual Enrollment College Credit Course for Qualifying Students

This course is designed to enable students to speak effectively on selected subjects using various methods. Classroom practice is given in oral and interpretive readings. Study is given to the correct preparation and delivery of different kinds of speeches as well as the use of correct speech habits and behavior. This course will transfer to many colleges and universities as the communication course required for most two and four year degrees. **This course may be used to meet the MACA Communication course requirement for graduation.**

**BUS 102 - Introduction to Business - (1 credit, 3 college credits) Seniors Only, one semester course)**

Dual Enrollment College Credit Course for Qualifying Students

This introductory course will investigate the role business plays in society and will discuss using a career in business as an area of ministry. Through an examination of the major functional areas of a business, students will be better able to determine the use of business as a career and ministry path. The biblical character of Nehemiah will be used as a case study to help students consider the necessary skills and perspective Christians need to be successful in life and the business world.

**Teacher's Aide** - (1/2 credit per semester; *Juniors and Seniors only; pre-arrangement with teacher*)

Students will be given the opportunity to assist teachers or work in the library under the approval of the Media Center Director. Possible duties include helping with bulletin boards, carrying items to the office, making copies, working with a younger struggling student, or grading papers. Students will maintain a daily journal as well as complete a quarterly paper or project. The Secondary Principal will assign interested students to a staff person who has a need for an aide.

### **Non-Credit Electives**

**Study Hall** - (No credit)

Students may enroll in a study hall for any class period during the day. .

## **High School Education Enrichment Program (EEP) Classes**

### **Drama - (1/4 Fine Arts credit each semester)**

Drama class will attempt to work on two major productions throughout the year and/or possibly some small skits. Students will learn proper technique of acting and speaking and will apply what they have learned in the productions.

### **HS Audio/Tech Team – ¼ Fine Arts credit each year)**

In this introductory course, students learn the fundamentals of sound board technology and how to control and mix sound during a performance. As students advance, they use their skills to support MACA programs and weekly worship services.

### **HS Worship Team – (1/4 Fine Arts credit each semester)**

Students (singers and musicians) must audition for a place on the team. The worship team will learn and lead the music for the weekly Chapels. Students may also be asked to perform at various school programs such as Grandparent's Day, Baccalaureate, Awards Ceremonies, etc. We also need students to perform audio-visual and sound board duties.

**MACA reserves the right to cancel any class for insufficient enrollment.**