

# *Arabia Mountain High School*

*"Highlighting Our Heritage, Greening Our Future"*

## Course Description Guide

2017-2018



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Dear Parents:

Welcome to Arabia Mountain High School, a Premier DeKalb School. As Head Counselor of this great school, I am inviting you to take advantage of the tremendous experiences offered at the home of the **Rams**. High School life can be an exciting and demanding time for our students. However, the support, encouragement, and guidance offered to our students create a community of high achievers in every aspect of our school in spite of the demands.

Academically, students at Arabia Mountain High School have proven to be among the highest performing students in the metro area. Students will have the opportunity to select from more than fifteen Advanced Placement courses and thirty advanced, gifted, or accelerated courses. Our students will easily compete at the collegiate level due to the preparation received in the classrooms.

Organizationally, our magnet schools and smaller learning community concepts provide opportunities for students to focus on Career Pathways. Career Pathways at Arabia Mountain High School support student interests in Engineering, Environmental Studies, Energy, Culinary Arts, Healthcare, Agriculture Science, Broadcast and Video Production, Web Design, and Visual and Performing Arts. Research and valuable field experiences will continue to reinforce learning objectives. We have developed this publication to help you plan an academic program that will provide the skills and knowledge needed for success after high school.

Again, welcome to Arabia Mountain High School and best wishes to all for a successful and rewarding school year.

Sincerely,

*Tammy B. Rogers*

Tammy B. Rogers Head  
Counselor

*"Highlighting Our Heritage, Greening Our Future"*

# Arabia Mountain High School's Academic Programs

Arabia Mountain High School for 9th – 12th grade students of all instructional levels serves as DeKalb's "Going Green" environmentally friendly high school. Arabia Mountain provides parents and students instructional programs with a strong college prep, career oriented foundation. Integrated learning opportunities are offered during the modified schedule by a staff trained to deliver specialized performance based standards. The instructional program also infuses parent and student support through parental involvement tasks, service learning for students, and uniforms to build a more structured culture.

## **Magnet Program**

Environmental, Energy and Engineering Magnet Program

DeKalb Schools Environmental, Energy and Engineering Magnet Program (grades 9 – 12) is designed to support students aspiring to become engineers, soil conservationists, microbiologists and other environmental related professions. Interested parents and students must apply for admission to the high school magnet programs.

## **Career Technology Programs / Pathways**

Career Technology Programs will prepare students in grades 9 - 12 to transition successfully to postsecondary education as well as acquire technical skills and knowledge needed for immediate employment or a future career. High School Career Technology Programs simulate real life experiences and are the first step to engaging in a career path.

**DEKALB COUNTY SCHOOL SYSTEM PROGRAM OF STUDY FORM**

Class of 2012 and subsequent years

Courses	General Education Diploma (Check One)					Transition Diploma  Required course work determined by Individualized Educational Program (IEP)
	Students with Disabilities (SWD)  Georgia High School Graduation Test (GHSGT) Required	Students with Disabilities (SWD)  Georgia Alternative Assessment (GAA) Required	College Preparatory Seal	Career Technology Seal	Honors/ Distinction Seal	
English*	4	4 Access Courses	4	4	4	
Math*	4	4 Access Courses	4	4	4	
Science*	4 4 <sup>th</sup> science can meet science or elective requirement	4 Access Courses	4 4 <sup>th</sup> science can meet science or elective requirement	4 4 <sup>th</sup> science can meet science or elective requirement	4 4 <sup>th</sup> science can meet science or elective requirement	
Social Studies* Rq'd .5 Am. Govt. ++5 Wld. Geog. 1 Wld. History 1 US History ****1 Economics	4	4 Access Courses	4	4	4	
Health/Physical Ed. .5 Health .5 PE 9 1**	2	2 Access Courses	2	2	2	
Electives***  Humanities*** World Languages* Career Technology***	6 2 units of math Support classes Required *No Foreign Language as determined by IEP  General Electives determined by IEP	6 Access Courses	6 *2 Units of the same World Language required  ***3 Units of Career Tech in the same pathway required or 3 Units of Humanities  1 General	6 *1 Unit of a World Language required  ***Units of Career Tech in the same pathway required  2 General	6 *3 Units of the same World Language required  3 General Electives	
<b>Totals</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	<b>24</b>	

**Students must pass the Georgia High School Graduation Test in 5 areas to receive a diploma.**

^ Requires 3.5 Cumulative Grade Point Average (CUGPA) and a 3.0 Core Grade Point Average (CGPA)

\*Core Courses

\*\* One unit may be exempt through validated full-year participation in school sponsored athletics, marching band, dance and/or JROTC.

\*\*\*Students are required to select elective courses based on the area of concentration with a minimum of three (3) units within the area of Career Technology or a minimum of three (3) units within the area of Humanities. Career Technology units must be in one of the following areas: BUS ED, FCS, TE, T&I or JROTC. Humanities include the following areas: World Languages, ~ESOL, Fine Arts, Visual Arts, Performing Arts, ELA and Social Studies.

~All identified ELL students must be enrolled in an ESOL course. Course level placement must be made per results of the ACCESS and/or WIDA Standards Language Proficiency Level. For approved ESOL delivery models, please refer to GaDOE ESOL Resource Guide.

\*\*\*\*Transfer students who have earned 0.5 CU for Economics have met state requirements; therefore, transfer students must take another 0.5 CU social studies elective to meet local graduation requirements.

++Transfer students who have not successfully completed 0.5 CU of World Geography may substitute another 0.5 CU social studies elective to meet local graduation requirements.

## Sample Grade Level Schedules

2017-2018 School Year

Grade Level	Fall Semester	Spring Semester
<b>Freshman</b>	Literature Composition 9 Accelerated A	Literature Composition 9 Accelerated B
	CCGPS Coordinate Algebra A CCGPS Accel Coord Alg/Anal Geom A	CCGPS Coordinate Algebra B CCGPS Accel Coord Alg/Anal Geom B
	<b>Biology Accelerated A</b>	<b>Biology Accelerated B</b>
	American Government Accelerated	World Geography Accelerated
	Health	P.E. 9
	Career Pathway Elective A	Career Pathway Elective B
	Elective or World Language A	Elective or World Language B
<b>Sophomore</b>	World Literature Accelerated A	World Literature Accelerated B
	CCGPS Analytic Geom A <b>or</b> Accel Analytic Geom/Adv Alg A	CCGPS Analytic Geom B <b>or</b> Accel Analytic Geom/Adv Alg B
	<b>Chemistry Accelerated A</b>	<b>Chemistry Accelerated B</b>
	World History Accelerated A <b>or</b> AP World History Accelerated A	World History Accelerated B <b>or</b> AP World History Accelerated B
	World Language A	World Language B
	<b>Elective or Environmental Science A</b>	<b>Elective or Environmental Science B</b>
	Career Pathway Elective A	Career Pathway Elective B
<b>Junior</b>	American Literature Accelerated A <b>or</b> AP Language A	American Literature Accelerated B <b>or</b> AP Language B
	CCGPS Advanced Algebra A Or Accel CCGPS Pre- Calculus A	CCGPS Advanced Algebra B Or Accel CCGPS Pre Calculus B
	<b>Physics Accelerated A AP Physics A</b>	<b>Physics Accelerated B AP Physics B</b>
	U.S. History Accelerated A AP U.S. History A	U.S. History Accelerated B AP U.S. History B
	World Language A	World Language B
	Career Pathway A	Career Pathway B
	<b>AP Environmental Science A or Oceanography A</b>	<b>AP Environmental Science B or Oceanography B</b>
<b>Senior</b>	British Literature Accelerated A <b>or</b> AP Literature A	British Literature Accelerated B <b>or</b> AP Literature B
	CCGPS Pre-Cal A, Calculus A, AP Statistics A, AP Calculus AB A, AP Calculus BC A	CCGPS Pre-Cal B, Calculus B, AP Statistics B, AP Calculus AB B, AP Calculus BC B
	<b>AP Biology A, AP Chemistry A, AP Physics B A, AP Physics C A, Human Anatomy</b>	<b>AP Biology B, AP Chemistry B, AP Physics B B, AP Physics C B, Human Anatomy</b>
	Principals of Economics A <b>or</b> AP Macroeconomics A	Principals of Economics B <b>or</b> AP Macroeconomics B
	Career Pathway A	Career Pathway B
	World Language A or Elective	World Language B or Elective
	Elective A or Physical Education I A	Elective B or Physical Education I B

## Recommended Electives:

Drama  
Art  
Band/ Orchestra/ Guitar  
Yearbook  
Newspaper  
Photography  
Creative Writing  
Speech/ Forensics  
JROTC Air Force  
Music Appreciation  
Physical Education Courses

Additional Science Courses  
Additional Social Studies Courses  
Additional World Language Courses  
Additional Math Courses  
Advanced Placement (AP) Courses

\*\*Actual schedules may vary depending upon official transcript evaluation and diploma type.

## ACADEMIC INFORMATION

Arabia Mountain High School opened Fall of 2009, and is a unit of the DeKalb County School System. We are a four-year, comprehensive high school accredited by the Georgia Department of Education and the Southern Association of Colleges and Schools. School system graduation requirements consist of a core curriculum and additional options leading to a high school diploma. The total number of required units of credit *cannot* be waived.

Students and parents should be familiar with the following terms:

- ❖ **Core Curriculum** – areas of study in which all students must complete specific courses in order to fulfill graduation requirements
- ❖ **Required Course** – one that is mandatory for a specific program of study
- ❖ **Elective Course** – a course that counts toward the total number of units required for Graduation but does not apply toward particular requirements of a specific program of study

### School Day

The school day consists of seven academic periods and a lunch period. *Each student must carry a full schedule of classes.* Students enrolled in joint enrollment and internship programs are considered fulltime students. The school year consists of two eighteen-week semesters. Students earn one-half unit of credit for each course per semester. Most courses meet for the entire school year, earning a total of one unit of credit, while some are intended as one-semester experiences.

### Advanced Placement (AP) Courses

The DeKalb County School system offers numerous Advanced Placement courses representing Computer science, language arts, mathematics, science, social studies, world language, music, and visual art. Most colleges and universities award credit for specific levels of performance on the AP exams given in May. Enrollment is open to all interested students. Interested students should contact an AP instructor or counselor for information.

## Grading Scale

All grades will be recorded on transcripts and report cards as *numeric* grades. The grading scale is as follows:

- A = 90 and above
- B = 80 – 89
- C = 71 – 79
- D = 70
- F = 69 and below



## Promotion/Retention

High school students must earn a certain number of units in order to earn promotion to the next grade level. The requirements for promotion are as follows:

- a.) to the tenth grade, 90 hours (6 units), three (3) of which must be core courses and three (3) elective courses\*;
- b.) to the eleventh grade, 180 hours (12 units), six (6) of which must be core courses and six (6) elective courses\*;
- c.) to the twelfth grade, 270 hours (18 units), nine (9) core courses and nine (9) elective courses\*.

\*Core Courses: English, Mathematics, Science, Social Studies, World Languages

## Schedule Changes

Once classes are scheduled, it is difficult to make schedule changes because many classes will have reached maximum enrollment. Students may not be enrolled in a class that is considered filled. Overloading classes constitutes a violation of State Standards and is not permitted.

If there is a need to request a schedule change, students must do so well in advance of the semester for which the change is desired.

After classes have been scheduled, requests will be considered only for the following reasons:

- ❖ the student has failed a required course and must repeat the course
- ❖ the student has failed a prerequisite and is not eligible to continue in the course sequence
- ❖ the student has failed to enroll in a course required for graduation
- ❖ the student demonstrates poor achievement in a prerequisite course and is advised by both the teacher and counselor or administrator not to enroll in a more advanced course
- ❖ there is a scheduling conflict or a course has been cancelled

Requests for changes of a class period or lunch *will not* be honored. Arabia Mountain High School reserves the right to make adjustments to student schedules due to changes in enrollment and/or to balance class sizes. Students enrolled in an Advanced, Accelerated or AP class requesting a change to a regular level course are expected to complete the first semester before the change will be made.



## Course Descriptions

### English

**Literature Composition 9**. This course focuses on a study of literary genres; the students develop initial understanding of both the structure and the meaning of a literary work. The students explore the effect of the literary form in regards to interpretation. The students will read across the curriculum to develop academic and personal interests in different subjects. While the focus is technical writing in ninth grade literature, the student will also demonstrate competency in a variety of writing genres: narrative, expository, persuasive, and technical. The students will engage in research, timed writings, and the writing process. Instruction in language conventions will occur within the context of reading, writing, and speaking, rather than in isolation. The students demonstrate an understanding of listening, speaking, and viewing skills for a variety of purposes. THIS COURSE MUST REFLECT THE GEORGIA PERFORMANCE STANDARDS.

**World Literature Composition**. This course focuses on a study of World Literature; the students develop an understanding of chronological context and the relevance of period structures in literature within world cultures. A focus is to explore the ways the work's place of origin affects its structure and how the chronology of a literary work affects its meaning. The students develop an understanding of literature as both a culture's product and a culture-bearer. An exploration of commonalities and differences among works of literature from different times and places in the world is a major component. The students will read across the curriculum to develop academic and personal interests in different subjects. Depending on which grade level this course is taught, the teacher will follow strands from the Georgia Performance Standards for that grade level for composition, conventions, and listening, speaking, and viewing.

**American Literature Composition**. This course focuses on the study of American literature, writing modes and genres, and essential conventions for reading, writing, and speaking. The student develops an understanding of chronological context and the relevance of period structures in American literature. The students develop an understanding of the ways the period of literature affects its structure and how the chronology of a work affects its meaning. The students read a variety of informational and literary texts in all genres and modes of discourse. Reading across the curriculum develops students' academic and personal interests in different subjects. While expository writing is the focus in American literature, the students will also demonstrate competency in a variety of writing genres: narrative, persuasive, and technical. The student will engage in research, timed writing, and the writing process. Instruction in language conventions will occur within the context of reading, writing, and speaking. The students demonstrate an understanding of listening, speaking, and viewing skills for a variety of purposes. THIS COURSE MUST REFLECT THE GEORGIA PERFORMANCE STANDARDS.

**British Literature Composition**. This course focuses on the study of British literature, writing modes and genres, and essential conventions for reading, writing, and speaking. The students develop an understanding of chronological context and the relevance of period structures in British literature. The students develop an understanding of the ways the period of literature affects its structure and how the chronology of a work affects its meaning. The students

encounter a variety of informational and literary texts and read texts in all genres and modes of discourse. Reading across the curriculum develops the students' academic and personal interests in different subjects. While the continued focus is expository writing in British literature, the student will also demonstrate competency in a variety of writing genres: narrative, persuasive, and technical. The students will engage in research, the impact that technology has on writing, timed writing, and the writing process. Instruction in language conventions will occur within the context of reading, writing, and speaking, rather than in isolation. The students demonstrate an understanding of listening, speaking, and viewing skills for a variety of purposes. THIS COURSE MUST REFLECT THE GEORGIA PERFORMANCE STANDARDS.

**Advanced Placement Language/Composition– Grade 11.** This course focuses on content, purpose, and audience as the guide for the students' organization in writing. The course will enable students to become skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts. The students will compose for a variety of purposes with a clear understanding of writer's purpose, audience expectations, and subjects as well as the way conventions and resources of language contribute to writing effectiveness. Expository, analytical, and argumentative writings support the academic and professional communication required by colleges; personal and reflective writing support the development of writing facility in any context. Students will examine primary and secondary sources to synthesize materials for their writing. An AP syllabus will be submitted and approved by College Board.

**Advanced Placement Literature/Composition; 23.0650000 – Grade 12.** The course focuses on an intensive study of representative works from various literary genres and periods. The focus is on the complexity and thorough analysis of literary works. The students will explore the social and historical values that works reflect and embody. The textual detail and historical context provide the foundation for interpretation: the experience of literature, the interpretation of literature, and the evaluation of literature. Writing to evaluate a literary work involves making and explaining judgments about its artistry and exploring its underlying social and cultural values through analysis, interpretation, and argument (e.g. expository, analytical, and argumentative essays). The writers will develop stylistic maturity: strong vocabulary, sentence variety, and effective use of rhetoric to maintain voice. An AP syllabus will be submitted and approved by College Board.

**Creative Writing; 23.031001 – Grades 9-12.** This elective course offers opportunities for students to explore different writing genres: narrative, descriptive, persuasive, and expository modes of discourse. The students will study different writers and their writing styles. The students will have opportunities to improve writing proficiency through a complete study of the components of solid writing: fluency, style, diction, mechanics, grammar, imaginative expressions, and details. The course allows students to utilize the writing process to write independently to improve their writing.

**Speech/Forensics; 23.046000 – Grades 9-12.** This elective course is a detailed study of forensic speaking including extemporaneous speaking, oration, and interpretation of literature, and debate. There is an emphasis on understanding various forensic speaking formats and the importance of applying reasoning, research and delivery skills. Critical thinking is a major component of this course.

## Mathematics

**CCGPS Coordinate Algebra:** The fundamental purpose of Coordinate Algebra is to formalize and extend the mathematics that students learned in the middle grades. The critical areas, organized into units, deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. Coordinate Algebra uses algebra to deepen and extend understanding of geometric knowledge from prior grades. The final unit in the course ties together the algebraic and geometric ideas studied. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**CCGPS Analytic Geometry:** The focus of Analytic Geometry on the coordinate plane is organized into 6 critical areas. Transformations on the coordinate plane provide opportunities for the formal study of congruence and similarity. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. The study of circles uses similarity and congruence to develop basic theorems relating circles and lines. The need for extending the set of rational numbers arises and real and complex numbers are introduced so that all quadratic equations can be solved. Quadratic expressions, equations, and functions are developed; comparing their characteristics and behavior to those of linear and exponential relationships from Coordinate Algebra. Circles return with their quadratic algebraic representations on the coordinate plane. The link between probability and data is explored through conditional probability. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**CCGPS Advanced Algebra:** It is in Advanced Algebra that students pull together and apply the accumulation of learning that they have from their previous courses, with content grouped into six critical areas, organized into units. They apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions. They expand their study of right triangle trigonometry to model periodic phenomena. And, finally, students bring together all of their experience with functions and geometry to create models and solve contextual problems. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**CCGPS Pre-Calculus:** Pre-Calculus focuses on standards to prepare students for a more intense study of mathematics. The critical areas organized in seven units delve deeper into content from previous courses. The study of circles and parabolas is extended to include other conics such as ellipses and hyperbolas. Trigonometric functions are further developed to include inverses, general triangles and identities. Matrices provide an organizational structure in which to represent and solve complex problems. Students expand the concepts of complex numbers and the coordinate plane to represent and operate upon vectors. Probability rounds out the course using counting methods, including their use in making and evaluating decisions. The

Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**Accelerated CCGPS Coordinate Algebra/Analytic Geometry A:** The fundamental purpose of Accelerated CCGPS Coordinate Algebra/Analytic Geometry A is to formalize and extend the mathematics that students learned in the middle grades. The critical areas, organized into units, deepen and extend understanding of linear relationships, in part by contrasting them with exponential phenomena, and in part by applying linear models to data that exhibit a linear trend. Coordinate Algebra uses algebra to deepen and extend understanding of geometric knowledge from prior grades. The next unit in the course ties together the algebraic and geometric ideas studied. Transformations on the coordinate plane provide opportunities for the formal study of congruence and similarity. The study of similarity leads to an understanding of right triangle trigonometry and connects to quadratics through Pythagorean relationships. The study of circles uses similarity and congruence to develop basic theorems relating circles and lines and rounds out the course. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**Accelerated CCGPS Analytic Geometry B / Advanced Algebra:** The focus of Accelerated CCGPS Analytic Geometry B / Advanced Algebra is organized into 10 critical areas. The need for extending the set of rational numbers arises and real and complex numbers are introduced so that all quadratic equations can be solved. Quadratic expressions, equations, and functions are developed; comparing their characteristics and behavior to those of linear and exponential relationships from Coordinate Algebra. Circles return with their quadratic algebraic representations on the coordinate plane. The link between probability and data is explored through conditional probability. They apply methods from probability and statistics to draw inferences and conclusions from data. Students expand their repertoire of functions to include polynomial, rational, and radical functions. They expand their study of right triangle trigonometry to model periodic phenomena. And, finally, students bring together all of their experience with functions and geometry to create models and solve contextual problems. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**Accelerated CCGPS Pre-Calculus:** Pre-Calculus focuses on standards to prepare students for a more intense study of mathematics. The critical areas organized in seven units delve deeper into content from previous courses. The study of circles and parabolas is extended to include other conics such as ellipses and hyperbolas. Trigonometric functions are further developed to include inverses, general triangles and identities. Matrices provide an organizational structure in which to represent and solve complex problems. Students expand the concepts of complex numbers and the coordinate plane to represent and operate upon vectors. Probability rounds out the course using counting methods, including their use in making and evaluating decisions. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

**Calculus** This course is an option for students who have completed Mathematics IV or its equivalent (Accelerated Mathematics III). It includes problem solving, reasoning and estimation, functions, derivatives, applications of the derivative, integrals, and application of the integral.

**Advanced Placement Calculus AB** Follows the College Board syllabus for the Advanced Placement Calculus AB Examination. Includes properties of functions and graphs, limits and continuity, differential and integral calculus. *Prerequisite:* Advanced Algebra and Trigonometry or analysis.

**Advanced Placement Calculus BC** Conforms to College Board topics for the Advanced Placement Calculus BC Examination. Covers Advanced Placement Calculus AB topics and includes vector functions, parametric equations, conversions, parametrically defined curves, tangent lines, and sequence and series. *Prerequisite:* Advanced Algebra and Trigonometry or Analysis.

**Advanced Placement Statistics** Follows the College Board syllabus for the Advanced Placement Statistics Examination. Covers four major themes: exploratory analysis, planning a study, probability, and statistical inference. *Prerequisite:* Either Euclidean Geometry or Informal Geometry, and Algebra II.

## **Science**

**Biology Grade** The Biology curriculum is designed to continue student investigations of the life sciences that began in grades K-8 and provide students the necessary skills to be proficient in biology. This curriculum includes more abstract concepts such as the interdependence of organisms, the relationship of matter, energy, and organization in living systems, the behavior of organisms, and biological evolution. Students will investigate biological concepts through experience in laboratories and field work using the processes of inquiry.

**Environmental Science** The Environmental Science curriculum is designed to extend student investigations that began in grades K-8. This curriculum is extensively performance, lab and field based. It integrates the study of many components of our environment, including the human impact on our planet. Instruction should focus on student data collection and analysis. Some concepts are global; in those cases, interpretation of global data sets from scientific sources is strongly recommended. It would be appropriate to utilize resources on the Internet for global data sets and interactive models. Chemistry, physics, mathematical, and technological concepts should be integrated throughout the course. Whenever possible, careers related to environmental science should be emphasized.

**Chemistry** The Chemistry curriculum is designed to continue student investigations of the physical sciences that began in grades K-8 and provide students the necessary skills to be proficient in chemistry. This curriculum includes more abstract concepts such as the structure of atoms, structure and properties of matter, characterization of the properties that describe solutions and the nature of acids and bases, and the conservation and interaction of energy and matter. Students investigate chemistry concepts through experience in laboratories and field work using the processes of inquiry.

**Physics** The Physics curriculum is designed to continue student investigations of the physical sciences that began in grades K-8 and provide students the necessary skills to be proficient in physics. This curriculum includes more abstract concepts such as interactions of matter and energy, velocity, acceleration, force, energy, momentum, and charge. This course introduces the students to the study of the correction to Newtonian physics given by quantum mechanics and relativity. Students investigate physics concepts through experience in laboratories and field work using the processes of inquiry.

**Forensic Science** In this course students will learn the scientific protocols for analyzing a crime scene, how to use chemical and physical separation methods to isolate and identify materials, how to analyze biological evidence and the criminal use of tools, including impressions from firearms, tool marks, arson, and explosive evidence.

**Human Anatomy/Physiology** The human anatomy and physiology curriculum is designed to continue student investigations that began in grades K-8 and high school biology. This curriculum is extensively performance and laboratory based. It integrates the study of the structures and functions of the human body, however rather than focusing on distinct anatomical and physiological systems (respiratory, nervous, etc.) instruction should focus on the essential requirements for life. Areas of study include organization of the body; protection, support and movement; providing internal coordination and regulation; processing and transporting; and reproduction, growth and development. Chemistry should be integrated throughout anatomy and not necessarily taught as a standalone unit. Whenever possible, careers related to medicine, research, health-care and modern medical technology should be emphasized throughout the curriculum. Case studies concerning diseases, disorders and ailments (i.e. real-life applications) should be emphasized.

**Advanced Placement Biology** This course is designed to be the equivalent of a two semester college introductory biology course usually taken by biology majors during their first year. The AP Biology course is designed to be taken by students after the successful completion of a first course in high school biology and on in high school chemistry. It aims to provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology. The topics covered on the course are molecules and cells, heredity and evolution, and organisms and populations. (College Board course description September 2007)

**Advanced Placement Chemistry.** This course is designed to be the equivalent of the general chemistry course usually taken during the first college year. Students should attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. AP chemistry students should study topics related to the structure and states of matter (atomic theory, atomic structure, chemical bonding, nuclear chemistry, gases laws, kinetic molecular theory, liquids and solids and solutions), chemical reactions (reaction types, stoichiometry, equilibrium, kinetics, and thermodynamics), and descriptive chemistry (chemical reactivity, products of chemical reactions, relationships in the periodic table, and organic chemistry). To develop the requisite intellectual and laboratory skills, AP Chemistry students need adequate classroom and laboratory time. It is expected that a minimum of 290 minutes per week will be allotted for an AP Chemistry course. Of that time, a minimum of 90 minutes per week, preferably in one session, should be spent in the lab. The AP Chemistry<sup>14</sup>

course is designed to be taken after the completion of a first course in high school chemistry. In addition, the recommended mathematics prerequisite for an AP Chemistry class is the successful completion of a second-year algebra course. It is highly desirable that a student have a course in secondary school physics and a four-year college preparatory program in mathematics. (College Board course description September 2007)

**Advanced Placement Environmental Science** AP Environmental Science is designed to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and/or preventing them. The following themes provide a foundation for the structure of the AP Environmental Science course:

(1) Science is a process, (2) Energy conversions underlie all ecological processes, (3) The Earth itself is one interconnected system, (4) Humans alter natural systems, (5) Environmental problems have a cultural and social context, and (6) Human survival depends on developing practices that will achieve sustainable systems. (Advanced Placement Course Description, May 1997. The College Board.)

**Advanced Placement Physics B.** The Physics B course includes topics in both classical and modern physics. Knowledge of algebra and basic trigonometry is required for the course; the basic ideas of calculus may be introduced in connection with physical concepts, such as acceleration and work. Understanding of the basic principles involved and the ability to apply these principles in the solution of problems should be one of the major goals of the course.

Students taken this course should cover the following five content areas: Newtonian mechanics, fluid mechanics and thermal physics, electricity and magnetism, waves and optics, and atomic and nuclear physics. The Physics B course should also include a hands-on laboratory component with a minimum of 12 student-conducted laboratory investigations. Each student should complete a lab notebook or portfolio of lab reports. (College Board course description September 2007)

## **Social Studies**

**American Government** An in-depth study of the American political system. This course focuses on the foundation, principles and structure of the American system of government, examines the role of political parties, social factors as they relate to the role of the citizen, and analyzes the decision-making process that are a part of the system of American political behavior. This course meets the state's Citizenship requirement for graduation.

**World Geography** Investigates regions of the world and how these regions influence the historical, economical, political and cultural development in an interdependent world. Includes geographic concepts, physical phenomena and the relationship of people to their environment. Includes environmental issues and decision-making skills. Covers regions, location (position on earth's surface), place (physical and human characteristics), relationships within places and movement (human interaction on the earth).

**World History** A survey course beginning with the earliest civilizations and highlighting

important developments throughout the world until the early 21st century. The course includes topics related to Early Civilizations and Classical Empires; Growth, Expansion, and the Emergence of the Modern World; Global Interaction and Conflict; and the Contemporary World.

**U.S. History** Examines the history of the United States beginning with the British settlement of North America. The course's main focus is the development of the United States in the 20th and 21st centuries. The course includes topics related to Colonization through the Constitution; New Republic to Reconstruction; Industrialization, Reform, and Imperialism; Establishment as a World Power; and the Modern Era.

**Principals of Economics** An introductory course into the principles of economics. The course includes topics related to Fundamental Economic Concepts, Microeconomics Concepts, Macroeconomics Concepts, International Economics, and Personal Finance Economics.

**Current Issues** Analyzes current issues and influences that are related to these issues and examines how decisions are made concerning those issues. Integrates and reinforces social studies skills.

**Ethnic Studies** Examines the diversity of American society; focuses on various ethnic groups that make up the American population. Covers cultural orientation, contributions of each group and cultural perspectives of each group. Integrates and reinforces social studies skills.

**Advanced Placement World History** Conforms to the College Board topics for Advanced Placement World History. Includes study of cultural, political, social and economic history. Stresses research and writing skills.

**Advanced Placement U.S. History** Conforms to College Board topics for the Advanced Placement United States History Examination. Covers discovery and settlement, Colonial Society, the American Revolution, Constitution and the New Republic, Age of Jefferson, Nationalism, Sectionalism, Territorial Expansion, Civil War, Reconstruction, Industrialization, Progressive Era, World War I, Depression, New Deal, World War II, The Cold War, through modern times.

**Advanced Placement Macroeconomics** Conforms to College Board topics for the Advanced Placement Macroeconomics Examination. Covers basic economic concepts, measurement of economic performance, national income and price determination and international economics and growth.

**Advanced Placement Human Geography** Conforms to the College Board topics for Advanced Placement Human Geography.

**Advanced Placement Psychology** Conforms to College Board topics for the Advanced Placement Introductory Psychology Examination. Covers methods, approaches and the history of psychology as a science, biological bases of behavior, sensation and perception, states of consciousness, learning, cognition, motivation and emotion, developmental psychology, personality, testing and individual differences, abnormal psychology, treatment of psychological disorders and social psychology.



## World Languages

**Spanish I** Introduces the Spanish language; emphasizes all skills: listening, speaking, reading, and writing skills in an integrated way. Includes how to greet and take leave of someone, to ask and respond to basic questions, to speak and read within a range of carefully selected topics and to develop an understanding of Spanish-speaking cultures.

**Spanish II** Enhances Level One skills in Spanish and provides opportunities to develop listening, speaking, reading, and writing skills in an integrated way. Provides continued practice in how to greet and take leave of someone, to ask and respond to basic questions, to speak and read within a range of carefully selected topics and to increase understanding of Spanish-speaking cultures.

**Spanish III** Enhances Level Two skills in Spanish and provides further opportunities to increase listening, speaking, reading, and writing skills in an integrated way. Provides continued practice in previous topics and introduces new topics; offers further opportunities to increase understanding of Spanish-speaking cultures.

**Spanish IV** Enhances Level Three skills in Spanish and provides further opportunities to increase listening, speaking, reading, and writing skills in an integrated way. Provides continued language development through exploration of familiar and unfamiliar topics and provides opportunities for a broader and more extensive understanding of Spanish-speaking cultures.

**Spanish V** Enhances Level Four skills in Spanish, provides opportunities to increase levels of proficiency in all skill areas and to deepen understanding of Spanish-speaking cultures.

**Advanced Placement Spanish Language** Conforms to College Board topics for the Advanced Placement Spanish Language Examination. Emphasizes the ability to comprehend formal and informal spoken Spanish, to acquire the vocabulary and grasp of structure to read newspapers, magazines and Hispanic literature, to compose expository passages and to speak accurately and fluently.

**French I** Introduces the French language; emphasizes all skills: listening, speaking, reading, and writing in an integrated way. Includes how to greet and take leave of someone, to ask and respond to basic questions, to speak and read within a range of carefully selected topics and to develop an understanding of French-speaking cultures.

**French II** Enhances Level One skills in French and provides opportunities to develop listening, speaking, reading, and writing skills in an integrated way. Provides continued practice in how to greet and take leave of someone, to ask and respond to basic questions, and to speak and read within a range of carefully selected topics. Provides opportunities to increase understanding of French-speaking cultures.

**French III** Enhances Level Two skills in French and provides further opportunities to increase listening, speaking, reading, and writing skills in an integrated way. Provides continued practice in previous topics and introduces new topics; offers further opportunities to increase

understanding of French-speaking cultures.

**French IV** Enhances Level Three skills in French and provides further opportunities to increase listening, speaking, reading, and writing skills in an integrated way. Provides continued language development through exploration of familiar and unfamiliar topics and provides opportunities to develop a broader and more extensive understanding of French-speaking cultures.

**Advanced Placement French Language** Conforms to College Board topics for the Advanced Placement French Language Examination. Emphasizes using the language for active communication. Stresses the ability to understand French in various contexts, to develop a vocabulary sufficient for reading newspapers, magazines, literary texts, and other nontechnical writing and to express oneself in speech and in writing coherently, fluently and accurately.

## **Physical Education**

**Personal Fitness** Provides instruction in methods to attain a healthy level of physical fitness. Covers how to develop a lifetime fitness program based on a personal fitness assessment and stresses strength, muscular endurance, flexibility, body composition and cardiovascular endurance. Includes fitness principles, nutrition, fad diets, weight control, stress management, adherence strategies and consumer information; promotes self-awareness and responsibility for fitness. This course is a graduation requirement.

**Health** Explores the mental, physical and social aspects of life and how each contributes to total health and well-being. Emphasizes safety, nutrition, mental health, substance abuse prevention, disease prevention, environmental health, family life education, health careers, consumer health, and community health.

**Weight Training.** Introduces weight training; emphasizes strength development training and proper lifting techniques. Includes fitness concepts for developing healthy lifetime habits.

**Aerobics Dance** Provides opportunities to perform choreographic routines to music and to increase strength, cardiovascular and muscular endurance and flexibility. Includes fitness concepts for developing healthy lifetime habits.

**Body Sculpting.** Provides methods to redefine body shape through specific exercises. Covers weight training, conditioning exercises and proper nutrition to improve muscle tone, muscle definition, posture, bodily proportions, overall condition of the body and increase energy levels. Based on the American College of Sports Medicine guidelines for fitness and conditioning programs.

**Physical Education I** Focuses on any combination or variety of team sports, lifetime sports, track and field events, aquatics/water sports, outdoor education experiences, rhythmic/dance, recreational games, gymnastics, and self-defense. Provides basic methods to attain a healthy and active lifestyle.

**Physical Education II** Enhances level-one skills in any different combination or variety of team sports, lifetime sports, track and field events, aquatics/water sports, outdoor education experiences, rhythmic/dance, recreational games, gymnastics, and self-defense. Further promotes methods to attain a healthy and active lifestyle.

## **Elective Courses**

**Beginning Guitar Techniques** Introduces basic guitar techniques. Covers performance and production, analysis and theoretical studies, historical and cultural contributions and influences, creative aspects of music and appreciation of music. Provides an individualized setting.

**Modern Dance I** Introduces modern dance; covers shape, form, line and experimentation with individual expression and creativity. Stresses aesthetic perception, creative expression and performance, historical and cultural heritage and aesthetic judgment and criticism.

**Visual Arts Drawing/ Painting I** Introduces drawing and painting techniques and a variety of drawing and painting media. Stresses critical analysis of master paintings and drawings of different styles and historical periods; emphasizes problem-solving techniques to achieve desired results in personal work.

**Visual Arts** Introduces art history, art criticism, aesthetic judgment and studio production. Emphasizes the ability to understand and use elements and principles of design through a variety of media, processes and visual resources. Explores master artworks for historical and cultural significance.

**Visual Arts/Ceramics/Pottery I: 50.04110.** Introduces the characteristics of clay and design in clay using various techniques of construction and decoration. Emphasizes hand building and introduces other forming techniques, surface decoration and glaze applications. Covers styles of ceramic works from Western and non-Western cultures.

**Photography.** Introduces photography as an art form; covers the historical development of photography and photographic design and its cultural influences. Emphasizes the basics of exposing and processing photographs; introduces 35mm photography. Stresses appropriate processing techniques and safe use of photographic materials and equipment.

**Drama Arts/Fundamentals I** Serves as prerequisite for other theater/drama courses. Develops and applies performance skills through basic vocal, physical and emotional exercises; includes improvisation and scene study and related technical art forms.

**Drama Arts/Fundamentals II** Enhances level-one skills by producing and studying children's theater in depth with performance opportunities.

**Drama Arts/Fundamentals III** Enhances level-two skills by producing and studying literature as related to theater. Provides opportunities for performance with focus on language arts classes.

**Beginning Band:** Provides opportunities to develop performance skills on a wind or percussion instrument. Emphasizes performance and production; may include analysis, historical and

cultural influences, improvisation and appreciation of music. Organizes objectives for self-paced progress through all four levels, stresses individual progress and group experiences.

**Intermediate Band:** Provides opportunities for intermediate-level performers to increase performance skills and precision on a wind or percussion instrument. Includes performance and production, analysis and theoretical studies, historical and cultural contributions and influences, creative aspects of music and appreciation of music. Stresses individual progress and learning and group experiences; strengthens reading skills.

**Advanced Band:** Provides opportunities for advanced-level performers to increase, develop and refine performance skills and precision on a wind or percussion instrument. Covers performance and production, analysis and theoretical studies, historical and cultural contributions and influences, creative aspects of music and appreciation of music at advanced levels of understanding. Organizes objectives for self-paced progress through all four levels. Stresses individual progress and learning strategies and ensemble experiences.

**Music Appreciation:** Introduces production and performance; covers terminology and idioms, elements of music, perceptive listening and attitudes and appreciation. Stresses the ability to become a literate consumer and the ability to speak and write about music.

**Beginning Orchestra I (Grades 9-12):** Provides opportunities to develop performance skills and precision on orchestral stringed instruments. Emphasizes performance and production, analysis and theoretical studies, historical and cultural contributions and influences, creative aspects of music and appreciation of music. Organizes objectives for self-paced progress through all four levels. Stresses individual progress and ensemble experiences.

**Intermediate Orchestra I (Grades 9-12):** Provides opportunities for intermediate-level performers to increase performance skills and precision on orchestral stringed instruments. Covers performance and production, analysis and theoretical studies, historical and cultural contributions and influences, creative aspects of music and appreciation of music. Organizes objectives for self-paced progress through all four levels. Stresses individual progress and group experiences.

**Beginning Choral Ensemble I:** Provides opportunities to develop performance skills and knowledge in ensemble singing. Limited to 16 to 20 performers and may include any style period. Covers performance and production, analysis and theoretical studies, historical and cultural influences, creative aspects of music and appreciation of music. Stresses balance of individual progress and group success.

**Intermediate Choral Ensemble I:** Provides opportunities for intermediate-level performers to increase performance skills and knowledge in large group choral singing. Covers performance and production, analysis and theoretical studies, historical and cultural contributions and influences, creative aspects of music and appreciation of music. Stresses individual progress and group experiences; offers large and small ensemble experiences.

**Advanced Choral Ensemble I:** Provides opportunities for advanced-level performers to increase performance skills and knowledge in large group choral singing. Limited to 16 to 20 performers and includes madrigal, notes, quartet and solo literature of all style periods. Covers performance and production, analysis and theoretical studies, historical and cultural contributions and influences, creative aspects of music and appreciation of music. Organizes objectives for self-paced progress through all four levels. Stresses individual progress and group experiences and a variety of styles appropriate to the smaller ensemble.

**Yearbook I:** Under development according to the GA Department of Education.

**Yearbook II:** Under development according to the GA Department of Education.

**Newspaper I:** Under development according to the GA Department of Education.

## **Career Pathway Electives**

***Small Business Development Pathway- This pathway is designed for those considering a career in business, especially small business. Courses provide students with the skills needed to develop and manage independent small businesses. Includes instruction in business administration; enterprise planning and entrepreneurship; start-up; small business operations and problems; personnel supervision; capitalization and investment; taxation; business law and regulations; e-commerce; home business operation; and applications to specific sectors, products, and services.***

**\*Introduction to Business & Technology** Introduction to Business & Technology is the foundational course for Business and Technology, Entrepreneurship, and Human Resources Management pathways. The course is designed for high school students as a gateway to the career pathways above, and provides an overview of business and technology skills required for today's business environment. Knowledge of business principles, the impact of financial decisions, and technology proficiencies demanded by business combine to establish the elements of this course. Emphasis is placed on developing proficient fundamental computer skills required for all career pathways. Students will learn essentials for working in a business environment, managing a business, and owning a business. The intention of this course is to prepare students to be successful both personally and professionally in an information-based society. Students will not only understand the concepts, but apply their knowledge to situations and defend their actions/decisions/choices through the knowledge and skills acquired in this course. Employability skills are integrated into activities, tasks, and projects throughout the course standards to demonstrate the skills required by business and industry. Competencies in the co-curricular student organization, Future Business Leaders of America (FBLA), are integral components of both the employability skills standards and content standards for this course.

**Legal Environment of Business:** Legal Environment of Business is the second course in the Small Business Development Career Pathway. This course concentrates on the legal aspects of business ownership and management. Legal issues will include contracts, sales, consumer law,

agency and employment law, personal and real property, risk management, environmental law, and government effects on business. The impact of ethics on business operations will be studied. International business principles are infused in the standards for Legal Environment of Business. Mastery of these standards through project-based learning and leadership development activities of Future Business Leaders of America (FBLA) will help prepare students with a competitive edge for the global marketplace.

**Entrepreneurial Ventures:** Entrepreneurial Ventures is the third course in the Small Business Development Career Pathway. This course concentrates on the management skills necessary for successful business operation. Students will study management strategies for developing and implementing business plans; structuring the organization; financing the organization; and managing information, operations, marketing and human resources.

International business principles are infused in the standards for Entrepreneurial Ventures. An integral component of the Entrepreneurial Ventures course is a school-based or community-based entrepreneurial venture that will engage students in the creation and management of a business and the challenges of being a small business owner. Mastery of these standards through project-based learning and leadership development activities of Future Business Leaders of America (FBLA) will help prepare students with a competitive edge for the global marketplace.

**Financial Literacy** Students need to be informed about their financial responsibilities today and to prepare for the real choices ahead. In this course they will learn about career decisions, money management, financial security, credit management, resource management, risk management, and consumer rights and responsibilities. Business partnerships with financial companies, guest speakers, field trips, and work-based learning activities can be incorporated in this course. Mastery of these standards through project-based learning and leadership development activities of Future Business Leaders of America (FBLA) will help prepare students with a competitive edge for the global marketplace.

**Culinary Arts Pathway-** *The Culinary Arts pathway creates an awareness of opportunities within the vast areas of the Food Service Industry. This pathway incorporates developments in the areas of institutional food, fine dining and basic baking principals. Pathway completers will have a strong foundation in the basics of food preparation, safety, nutrition, and restaurant operating procedures.*

**\*Introduction to Culinary Arts** Introduction to Culinary Arts is a course designed to introduce students to fundamental food preparation terms, concepts, and methods in Culinary Arts where laboratory practice will parallel class work. Fundamental techniques, skills, and terminology are covered and mastered with an emphasis on basic kitchen and dining room safety, sanitation, equipment maintenance and operation procedures. Course also provides an overview of the professionalism in the culinary industry and career opportunities leading into a career pathway to Culinary Arts.

**Culinary Arts I** Culinary Arts I is designed to create a complete foundation and understanding of Culinary Arts leading to post secondary education or a foodservice career. Building from

techniques and skills learned in Foundation of Culinary Arts, this fundamentals course begins to involve in-depth knowledge and hands on skill mastery of Culinary Arts.

**Culinary Arts II** Culinary Arts II is an advanced and rigorous in-depth course designed for the student who has continued the Culinary Arts Pathway and wishes to continue their education at the post secondary level or enter the foodservice industry as a proficient and well rounded individual. Strong importance is given to refining hands on production of the classic fundamentals in the commercial kitchen.

**Engineering Pathway (STEM)**- *This pathway is a sequence of courses which, when combined with traditional mathematics and science courses in high school, introduces students to the scope, rigor and discipline of engineering. This pathway will introduce students to the field of engineering technology. Students will solve problems using common engineering practices. Students will be acquainted with the major fields of engineering and with the diverse functions engineers and technologists perform. Students will be familiar with the paths and certifications that can lead to careers in engineering and engineering technology. Students will understand and demonstrate communication skills necessary in the field of engineering. They will employ an individual and team approach while solving engineering problems.*

**\*Foundations of Engineering and Technology**. Foundations of Engineering and Technology is the introductory course for all Georgia Engineering and Technology Education pathways. This course provides students with opportunities to develop fundamental technological literacy as they learn about the history, systems, and processes of invention and innovation.

**Engineering Concepts**. Engineering Concepts is second course in the engineering pathway. This course introduces students to the fundamental principles of engineering. Students learn about areas of specialization within engineering and engineering design, and apply engineering tools and procedures as they complete hands-on instructional activities.

**Engineering Applications**. Engineering Applications is the third course in the engineering pathway. Students have opportunities to apply engineering design as they develop a solution for a technological problem. Students use applications of mathematics and science to predict the success of an engineered solution and complete hands-on activities with tools, materials, and processes as they develop a working drawings and prototypes.

**Research, Design and Project Management** Research, Design, and Project Management is the fourth course in the engineering pathway. This course provides students with opportunities to work with students from other pathways as a member of a design team. Research strategies, prototype testing and evaluation, and communication skills are emphasized.

**Energy Systems Pathway**- *This pathway will introduce students to energy systems technologies. Students will understand mechanical, electrical, fluid, and alternate systems. Students will also identify and understand energy resources. This pathway will cover the codes, regulations, and industry standards that are currently in place for sustainable energy buildings and Green Buildings. Evaluation of a building style and the energy efficient materials used in its constructions will be included. Students will develop an awareness of the energy crisis and the use of alternative energy.*



**\*Foundations of Energy and Technology** . This introductory course is designed to allow students to develop a broad understanding of the energy industry including infrastructure, generation, transmission and distribution of nonrenewable, renewable, and inexhaustible energy sources. Energy sources will be researched to include the regional and global economic implications, environmental, and sustainability issues. Students will explore future trends of energy and power. Students will develop, through research, an alternative energy system that will demonstrate their understanding of a unique, as well as appropriate, approach to energy and power generation

**Energy and Power Technology** This is an introductory course that explores the relationship between force, work, energy, and power. Students study the characteristics, availability, conversion, control, transmission, and storage of energy and power. Students will explore and apply the principles of electrical, fluid, and mechanical power. Students will research renewable, non-renewable, and inexhaustible resources and conservation efforts. Students will develop an awareness of the many careers that exist in energy and related technologies.

**Appropriate and Alternative Energy Technologies**. This course will help students develop an understanding of the differences between nonrenewable, renewable, and inexhaustible energy sources and how these energy sources affect their world. Alternative energy sources will be researched to include the regional implications and economic, environmental, and sustainability issues. Students will evaluate the positive and negative impacts of nuclear power and its relevancy to various situations in today's society. Students will explore future trends of energy, power, and transportation. Students will develop, through research, an alternative energy system that will demonstrate their understanding of a unique, as well as appropriate, approach to energy generation.

**Work Based Learning: CBE Co-op** Provides on-the-job, site-based training experiences for Cooperative Business Education students. Requires supervision by the business education instructor, training plans, and training agreements evaluated by the employer and the instructor. Co-op students must be compensated.

**Plant Science/Horticulture Pathway- The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.**

**\*Basic Agricultural Science and Technology** This course is designed as an introduction or support course for the Agriscience Pathway Program of Study. The course introduces the major areas of scientific agricultural production and research; presents problem solving lessons and introductory skills and knowledge in agricultural science and agri-related technologies. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.



**General Horticulture and Plant Science.** This course is designed as an introduction for the Horticulture/Plant Science Pathway Program of Study. The course introduces the major concepts of plant and horticulture science. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

**Nursery and Landscape.** This course is designed to provide students with the basic skills and knowledge utilized by the green industry in nursery production and management and landscape design and management. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

**Natural Resources Management** This course introduces conservation management and maintenance of natural resources and good stewardship of air, soil, water, land, fish, and wildlife resources for economic, recreation, and health purposes. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

**Animal Science Technology/ Biotechnology** As part of the Agriscience pathway program of study, this course is designed to introduce students to the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. Introduces scientific principles applied to the animal industry; covers reproduction, production technology, processing, and distribution of agricultural animal products. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

**Therapeutic Services Pathway- Students wishing to pursue a career in the Healthcare Industry will receive initial exposure to healthcare science skills and attitudes applicable to healthcare including the concepts of health, wellness, and preventive care.**

**\*Introduction to Healthcare Science.** Students wishing to pursue a career in the Healthcare Industry will receive initial exposure to healthcare science skills and attitudes applicable to healthcare including the concepts of health, wellness, and preventive care. The changes in healthcare delivery systems and the subsequent impact on healthcare delivery for individual consumers is explored and evaluated. Medical terminology, microbiology, and basic life support skills are emphasized, as well as, the ethical and legal responsibilities of today's healthcare provider. Academics and other related sciences are integrated throughout the course. The students are required to meet both national and intrastate professional guidelines as designated by applicable regulatory agencies such as the Occupational Health and Safety Administration (OSHA) and Center for Disease Control (CDC). Students may participate in opportunities for professional networking and the enhancement of their vocational portfolios by receiving recognition for their accomplishments through a variety of venues related to vocational student organizations – Health Occupations Students of America (HOSA), Vocational Industrial Clubs of America (VICA), as well as, other external agencies such as the American Red Cross and the American Heart Association. This course is considered broad-based with high impact and is a prerequisite for all Healthcare Science Technology Education courses.

**Application of Therapeutic Service.** Applications of Therapeutic Services is an intermediate course for the Therapeutic Services Career Pathway and is designed to provide an overall

framework of basic skills utilized in the provision of direct client care. Monitoring and evaluating client status includes assessment techniques such as vital signs, as well as, the application of mathematical concepts appropriate to clinical expectations and/or work-based learning. The function and fundamental pathophysiology of each body system is evaluated prior to community first aid and basic life support techniques which are expanded to include rescue skills for infants and children. Students continue with the development of individual career portfolios utilizing postsecondary program research, employability skills, and/or work based learning and may receive recognition for their accomplishments through a variety of venues locally, regionally, and nationally such as the American Red Cross, American Heart Association, Health Occupations Students of America (HOSA), and the National Consortium on Health Science and Technology Education (NCHSTE). Upon completion of this course and pre-requisites students who successfully master these standards will be eligible to sit for a National Certificate of Proficiency or Mastery, issued in partnership between NCHSTE and National Occupational Competency Testing Institute (NOCTI).

**General Medicine.** The course is designed to offer students (preferably upper classmen -juniors or seniors) the opportunity to become effective and efficient multi-skilled healthcare providers as they develop a working knowledge of each of the major departments of the average acute care setting/hospital, including but not limited to: Orthopedics, Cardiology, Diagnostic Imaging, MedSurg, Gastroenterology, Urology, and Customer Care Services. Students focusing on a career path in medicine (Pre-Med) or on a career in one of the ancillary departments noted above will apply classroom/lab knowledge and skills in the clinical setting as they participate in direct client care. The work-based learning strategy appropriate for this course is a minimum 40-hour clinical practicum.

**Broadcast Video/Production Pathway- Students learn studio and field production for video and television. Through hands-on experience with cutting edge digital equipment, students will video projects and edit in linear and non-linear suites. Students apply theoretical concepts while planning and designing programs, capturing, editing and post-producing shows in the studio and the field.**

**\*Broadcast /Video Production I** This one credit course is the first in a pathway that prepares the student for employment or entry into a postsecondary education program in the Broadcast/Video Production career field. Topics covered may include, but are not limited to: history of mass media, terminology, safety, basic equipment, script writing, production teams, production and programming, set production, lighting, recording and editing, studio production, and professional ethics. Skills USA, the Georgia Scholastic Press Association, Technology Student Association (TSA) and Student Television Network are examples of, but not limited to, appropriate organizations for providing leadership training and/or for reinforcing specific career and technical skills and may be considered an integral part of the instructional program. All material covered in BVP1 will be utilized in subsequent courses.

**Broadcast/Video Production II.** This one credit course is the second in a series to prepare for a career in Broadcast/Video production and/or to transfer to a postsecondary program for further study. Topics include: Planning, Writing, Directing and Editing a Production; Field Equipment Functions; Operational Set-Up and Maintenance; Advanced Editing Operations; Studio Productions; Performance; Audio/Video Control Systems; Production Graphics; Career

Opportunities; and Professional Ethics. Skills USA, the Georgia Scholastic Press Association, Technology Student Association (TSA) and Student Television Network are examples of, but not limited to, appropriate organizations for providing leadership training and/or for reinforcing specific career and technical skills and may be considered an integral part of the instructional program. All material covered in BVP1 and BVP2 will be utilized in subsequent courses.

**Broadcast/Video Production III (ACCT-BVP 3).** This one credit transition course is designed to facilitate student-led broadcasts/videos under the guidance of the instructor.

Students work cooperatively and independently in all phases of broadcast/video production. Skills USA, the Georgia Scholastic Press Association, Technology Student Association (TSA), and Student Television Network are examples of, but not limited to, appropriate organizations for providing leadership training and/or for reinforcing specific career and technical skills and may be considered an integral part of the instructional program. All material covered in BVP1, BVP2 and BVP3 will be utilized in subsequent courses.

**Broadcast/Video Production Applications** Broadcast/Video Production Applications is the fourth course in the BVP pathway and is designed to assist students in mastering skills necessary to gain entry level employment or to pursue a post- secondary degree or certificate. Topics include advanced camcorder techniques, audio production, scriptwriting, producing, directing, editing, employability skills, and development of a digital portfolio to include resume', references, and production samples. Skills USA, the Georgia Scholastic Press Association, Technology Student Association (TSA), and Student Television Network are examples of, but not limited to, appropriate organizations for providing leadership training and/or for reinforcing specific career and technical skills and may be considered an integral part of the instructional program. Instructor approval of digital portfolio (as needed for satisfactory completion of BVP 3) required prior to registration for this course.

**Computer Networking Pathway-** *The rapidly changing digital world of the Information Technology Career Cluster engages students in hands-on learning to prepare for careers that create, use, modify, and engage technology skills. Graphics, multimedia animation, web design, game and application development, networking, and computer repair are all possibilities.*

**Computing in the Modern World.** The goal of this course is to provide all students with an introduction to the principles of computer science and its place in the modern world.

This course should also help students to use computers effectively in their lives, thus providing a foundation for successfully integrating their own interests and careers with the resources of a technological society. In this course, high school students can acquire a fundamental understanding of the operation of computers and computer networks and create useful programs implementing simple algorithms. By developing Web pages that include images, sound, and text, they can acquire a working understanding of the Internet, common formats for data transmission, and some insights into the design of the human computer interface. Exposure to career possibilities and discussion of ethical issues relating to computers should also be important threads in this course.

**Beginning Programming.** The major goal of this course is for students to develop the computer science skills of algorithm development, problem solving, and programming. While the emphasis of the course will be on programming, students will also be introduced to other

important topics, such as careers, the limits of computing and the difference between interpreters and compilers

**Intermediate Programming.** The goal of this course is to deepen students understanding of computing. Students will learn key concepts of software engineering, graphical user interface, and user interface design. Students will gain a deeper understanding of basic data structures and use them to solve more complex problems in a collaborative manner.

**JROTC Air Force I. Aerospace Science** This is the recommended first AS course for all new cadets. It is an aviation history course focusing on the development of flight throughout the centuries. It starts with ancient civilizations, then progresses through time to modern day. The emphasis is on civilian and military contributions to aviation; the development, modernization, and transformation of the Air Force; and a brief astronomical and space exploration history. It is interspersed with concise overviews of the principles of flight to include basic aeronautics, aircraft motion and control, flight power, and rockets. Throughout the course, there are readings, videos, hands-on activities, and in-text and student workbook exercises to guide in the reinforcement of the materials. Many of the 72 hours dedicated to leadership studies relate directly to the academic subject matter. The LE-100 textbook introduces cadets to the Air Force Junior Reserve Officer Training Corps (AFJROTC) program providing a basis for progression through the rest of the AFJROTC program while instilling elements of good citizenship. It contains sections on cadet and Air Force organizational structure; uniform wear; customs, courtesies, and other military traditions; health and wellness; fitness; individual self-control; and citizenship.

**JROTC Air Force II: Aerospace: Science of Flight and Leadership II** The second year is a science course designed to acquaint the student with the aerospace environment, the human requirements of flight, principles of aircraft flight, and principles of navigation. The course begins with a discussion of the atmosphere and weather. After developing an understanding of the environment, how that environment affects flight is introduced. Discussion include the forces of lift, drag, thrust, and weight. Students also learn basic navigation including map reading, course plotting, and the effects of wind. The portion on the Human Requirements of Flight is a survey course on human physiology. Discussed here are the human circulatory system, the effects of acceleration and deceleration, and protective equipment. Leadership Education 200 hours stress communications skills and cadet corps activities. Much information is provided on communicating effectively, understanding groups and teams, preparing for leadership, solving conflicts and problems, and personal development. Written reports and speeches compliment the academic materials. Cadet corps activities include holding positions of greater responsibility in the planning and execution of corps projects.

**JROTC Air Force III: Aerospace Science: Global and Cultural Studies I** Global and Cultural Studies is a multidisciplinary course that introduces students to various regions of the world from a geographic, historical and cultural perspective. The course provides increased international awareness and insight into foreign affairs that permits a more educated understanding of other cultures and enhanced knowledge of America's interests and role in the world. Geopolitical issues such as terrorism, economics, politics, military issues, religion,

environmental concerns, human rights, disease, over population, literacy, the migration of peoples and other cultural issues will be examined. The regional areas included in this course are Europe, the Middle East, South Asia, East Asia, Africa, and Latin America. The lessons include excellent videos to provide a window into life and issues within the regions, followed by a variety of hands-on activities created to engage the student. Readings are also available to set the stage for each lesson, along with workbook exercises suitable for in-class or homework assignments.

**JROTC Air Force IV: Aerospace: Astronomy and/or Leadership III.** Explorations: An Introduction to Astronomy explores the history of astronomy to include prehistoric astronomy, the early ideas of the heavens. The size and shape of the earth are discussed as well as the distance and size of the Sun and Moon. Other topics such as astronomy in the renaissance and Isaac Newton and the Birth of Astrophysics and the growth of astrophysics are discussed. We take focus on the Earth as a planet and the Earth's interior; the age of the Earth and Earth's magnetic atmosphere and magnetic field. The Moon is discussed in detail including its description, its structure, and its origin and history, as well as its eclipses and tides. An in-depth study of the Solar System, the terrestrial planets and the outer planets is covered as well. The Leadership Education III: Life Skills and Career Opportunities textbook will be helpful to students deciding which path to take after high school. Information on how to apply for admission to college or to a vocational or technical school is included. Information on how to begin the job search is available to students who decide not to go to college or vocational school. Available also is information about financial planning and how to save, invest, and spend money wisely, as well as how not to get caught in the credit trap. Students are informed about real life issues such as understanding contracts, leases, wills, warranties, legal notices, and personal bills. Citizen responsibilities such as registering to vote, jury duty, and draft registration will be helpful to. For those students who may be moving into an apartment of their own, information is presented on apartment shopping and grocery shopping skills. There is information on how to prepare a résumé and the importance of good interviewing skills. If there are students who are interested in a career in the military, with the federal government, or an aerospace career, information is also provided for them.

**\*Required for Pathway Completion**

**\*\*\*All students must select a pathway upon enrollment at Arabia Mountain High School**

## **EOCT REQUIREMENTS**

**End of Course Tests (EOCT)** are state required tests for certain courses including CCGPS Coordinate Algebra, CCGPS Analytic Geometry, US History, Economics, Ninth Grade Literature and Composition, American Literature and Composition, Biology, and Physical Science. For students enrolled in grade nine for the first time on July 1, 2011 or after, the EOCT counts as 20% of the final grade.

