

## MATHEMATICS

### ALGEBRA I

**Grades:** 9; **Credit:** 1.0 (full year course)

**Prerequisites:** *Successful completion of Pre-Algebra.*

Algebra I is designed to help students understand the basic structure of algebra and acquire proficiency in applying algebraic concepts and skills. Topics include functions and graphs of lines; equations, inequalities, and word problems in one and two variables; systems of equations and inequalities; statistics; polynomials; quadratic equations; and problem solving.

### GEOMETRY

**Grades:** 9, 10; **Credit:** 1.0 (full year course)

**Prerequisites:** *Successful completion of Algebra I.*

The Geometry course includes an in-depth analysis of plane, solid, and coordinate geometry as they relate to both abstract mathematical concepts as well as real-world problem situations. Topics include logic and proof, parallel lines and polygons, perimeter and area analysis, volume and surface area analysis, similarity and congruence, trigonometry, and analytic geometry.

### ALGEBRA II

**Grades:** 10, 11; **Credit:** 1.0 (full year course)

**Prerequisites:** *Successful completion of Algebra I and Geometry.*

Algebra II is designed to continue the study of algebraic equations, verbal problems, graphing, and other topics treated in Algebra I. This course introduces and develops new topics including complex numbers, fundamental concepts of analysis, logarithmic and exponential equations, analysis of conic sections, sequences, and series.

### PRE-CALCULUS

**Grades:** 11, 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *Approval of Math Department; Final grade of 'B' or higher in Algebra II.*

Pre-calculus is an extensive study of the library of functions. You will learn some important properties of polynomials, exponential, logarithmic, and trigonometric functions. Specifically, students will learn how these functions behave, how they look graphically, and how you can manipulate them.

### INTEGRATED MATH

**Grades:** 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *Successful completion of Algebra II.*

This course is designed to review the basic math skills of Algebra 1, Geometry and Algebra 2 that students will need to be successful in the field of mathematics. This course will help foster an understanding and appreciation of the fundamentals of mathematics and how they are used in the world today by teaching students to think critically, solve open-ended problems, and apply mathematic principles to real-life problems.

### CALCULUS *\*Course offered based upon demand*

**Grades:** 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *Approval of Math Department; Final grade of 'B' or higher in Pre-Calculus.*

This course is a study of differentiation and integration techniques with an emphasis on applications. This course introduces and develops the four basic parts of introductory calculus: limits, differentiation, definite integration, and indefinite integration.

## SCIENCE

### BIOLOGY

**Grades:** 9, 10; **Credit:** 1.0 (full year course)

**Prerequisites:** *None.*

Biology involves the study of life and focuses on the basic characteristics and interactions of plants, animals, and microorganisms in our environment. Topics include the history of biology, the cell and cell processes, genetics and heredity, cycles in nature, photosynthesis and respiration, ecology, and continuity of life.

### ENVIRONMENTAL SCIENCE

**Grades:** 10, 11; **Credit:** 1.0 (full year course)

**Prerequisites:** *None.*

Environmental Science is a course in which students will use scientific inquiry to pose questions, seek answers and design solutions for environmental issues. Students acquire knowledge of basic scientific concepts of systems and use them in interpreting phenomena of the real world.

### CHEMISTRY

**Grades:** 10, 11; **Credit:** 1.0 (full year course)

**Prerequisites:** *None.*

This course is designed to introduce chemistry and outline information about matter and change. Chemistry is a competency-based course that focuses on many fields of chemistry starting from the atomic structure, electrons in atoms, classification of atoms in the periodic table, and the different chemical bonds. The course will provide also information about chemical reactions, chemical quantities, reaction rate and equilibrium, nuclear reactions, state of matter, the behavior of gases, solutions, and acids bases and salts.

### PHYSICS

**Grades:** 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *Successful completion of Algebra II.*

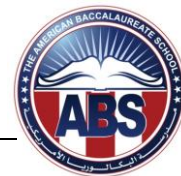
Physics involves the study of properties and interactions of matter and energy. Problem-solving skills are stressed throughout the course as students investigate such topics as the historical development of physics, force and motion, work, heat, sound, light, electricity, magnetism, and physics applications in everyday activities.

### OCEANOGRAPHY

**Grades:** 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *None.*

Oceanography is the study of the physical, chemical, geological, and biological aspects of the oceans. Topics include oceanographic instruments, the chemistry of seawater, ocean sediments, weather and climate, waves, tides and currents, life in the oceans, habitats, maritime heritage, and current issues created by the interaction of science and technology.



## ENGLISH

### GRAMMAR AND COMPOSITION

**Grades:** 9; **Credit:** 1.0 (full year course)

**Prerequisites:** None.

This course is designed to continue English and grammar composition from the previous year, focusing on more advanced concepts of proper sentence structure, word analysis, advanced spelling and vocabulary, and public speaking. Students will need to have accomplished these concepts in order to master the relatively difficult English language.

### WORLD LITERATURE AND COMPOSITION

**Grades:** 10; **Credit:** 1.0 (full year course)

**Prerequisites:** None.

This course is designed to expose students to a variety of authors, literary forms, and movements in the World Literature canon. In addition, students will learn how to formulate their ideas into expository text, as well as create and defend positions through public speaking. The goal is to enable the student to employ rhetoric as a tool for self-expression, and create a critical foundation that will benefit them throughout their academic and professional careers.

### AMERICAN LITERATURE

**Grades:** 11; **Credit:** 1.0 (full year course)

**Prerequisites:** None.

This course is designed to expose students to a variety of authors, literary forms, and movements in the World Literature canon. In addition students will learn how to formulate their ideas into both creative and expository text, as well as create and defend positions through public speaking. The goal is to enable the student to employ rhetoric as a tool for self-expression, and create a critical foundation that will benefit them throughout their academic and professional careers.

### BRITISH LITERATURE

**Grades:** 12; **Credit:** 1.0 (full year course)

**Prerequisites:** None.

This course is designed to explore the origins of modern Western literature and language. We will explore these origins by recognizing and analyzing the relevance of British literature to contemporary and/or personal events and situations from short stories, novels, plays, film, poems, and personal essays. Students will develop a subject critique and create excellent literary, interpretive, and responsive writings throughout the year. Every student, by the end of this year, should be able to understand that British literature set the foundation for most Western writing and that without it literature would not be where it is today.

### CREATIVE WRITING \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This course is designed for students who are proficient writers interested in writing original poetry, plays, essays, and short stories. Students consider the elements of creativity - inspiration, form, and content - in relation to styles of representative authors. Self-criticism, group evaluation, and publication of students' work are required activities. Projects may include publication of a literary magazine.

### SPEECH \*Course not offered every semester

**Grades:** 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

A survey course in basic oral communication; public speaking helps students understand the correlation between speech techniques and speaker responsibilities. Students focus on group dynamics, public speeches, and oral interpretation while emphasizing delivery strategies. They learn to gather, evaluate, organize, and articulate information in an interesting and meaningful manner. At the completion of this course, students will be able to speak effectively and confidently in formal, informal, and business communication situations.

## HUMANITIES/SOCIAL SCIENCES

### GEOGRAPHY/ANCIENT HISTORY

**Grades:** 9; **Credit:** 1.0 (full year course)

**Prerequisites:** None.

This course is designed to open the mind and make the world seem a little smaller for the student. For one semester, students will learn about the many environments found around the world, and how people interact with them. The other semester will look at the ancient cultures – Mesopotamia, Egypt, Assyria, and Persia – that began civilization.

### WORLD HISTORY I

**Grades:** 10; **Credit:** 1.0 (full year course)

**Prerequisites:** None.

In World History 1, you will be introduced to the story of civilization from the first cities of Mesopotamia to the beginning of Industrialization. We will be looking at all of the world's people on every continent, but will place special emphasis on how events in Southwest Asia and Europe have had an impact across the globe.

### WORLD HISTORY II

**Grades:** 11; **Credit:** 1.0 (full year course)

**Prerequisites:** Successful completion of World History I.

In World History 2 you will be introduced to the story of the last 500 years (1500-2008). This history will reveal a world whose regions come to influence each other more and more. At the same time we find that the gap between the wealth of some and the poverty of others has grown ever greater.

### CAREER PLANNING \*Course not offered every semester

**Grades:** 11; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

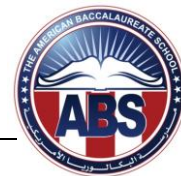
In this elective course you will explore the interconnectedness of academic concepts, facts, and procedures and their application in the world of work. By assessing your own strengths and aptitudes, you will determine career options most suitable for you and the steps needed to obtain them.

### PSYCHOLOGY \*Course not offered every semester

**Grades:** 11, 12; **Credits:** 0.5 (semester course)

**Prerequisites:** None.

This elective course examines the principles of learning, characteristics of personality, measurement of intellectual abilities, and the effects of heredity and environment on human behavior.



## **BUSINESS**

### **INTRO TO BUSINESS** \*Course not offered every semester

**Grades:** 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This course is designed to introduce the basic concepts in business such as types of business and business finance basics.

### **FINANCE** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** Successful completion of Business Studies.

This course is designed to introduce the basic concepts in Finance such as planning personal finances, banking and credit, investing financial resources, and protecting your finances.

### **ACCOUNTING** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** Successful completion of Finance.

This course is designed to introduce the basic concepts in accounting such as Introduction to Accounting, The Basic Accounting Cycle, Accounting for a Payroll System, the Accounting Cycle for a Merchandising Corporation, and Accounting for Special Procedures.

### **PERSONAL FINANCE** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** Successful completion of Finance.

This course is a blend of financial theory with financial applications. It will encourage the students to develop skills in personal financial management (balancing a checkbook, budgeting income and expenditures, planning for financial security and retirement) while providing an understanding of the U.S. financial structure (savings and investment alternatives, financing and credit sources, the role of insurance in protecting income and assets, federal income tax requirements). It is designed to be a practical course in managing personal finances for both business and non-business students.

### **ECONOMICS** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

The goal of this course is for students to demonstrate an understanding of basic economic concepts. Topics include the stock market, comparative economic systems, and the impact of political and social decisions on the economy, and the role of the individual, government, and businesses in capitalism.

## **TECHNOLOGY**

### **OFFICE APPLICATIONS** \*Course not offered every semester

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (full year course)

**Prerequisites:** None.

This course teaches students advanced word processing, spreadsheet, and presentation software media. Students access, organize, create, and communicate information for solving problems and constructing new knowledge, products, and systems. It is a hands-on practical course with students using the computers on a regular basis.

### **DIGITAL MEDIA** \*Course not offered every semester

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This course is designed to teach students general movie making techniques including: proper editing techniques; compose visual production work using appropriate software; write content appropriate scripts/storyboards and treatments for productions; master Microsoft MovieMaker program using various techniques, and application.

### **DIGITAL PHOTOGRAPHY** \*Course not offered every semester

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This is an introductory course that is designed to teach students the key concepts in digital imaging basics and the importance of digital photography in news publications. Students will learn to operate a variety of digital imaging hardware including digital cameras, photo printers, image editing and authoring software (such as Adobe Photoshop CS), film and flatbed scanners, light meters, studio and portable electronic lighting, and related accessories.

### **DIGITAL PUBLISHING** \*Course not offered every semester

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (full year course)

**Prerequisites:** Passing grade in English the previous school year.

This course is designed to teach students graphic design, layout, publishing, and critical writing skills, while creating the school newspaper. It is a hands-on practical course with the students using the computers on a regular basis.

### **YEARBOOK I** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 1.0 (full year course)

**Prerequisites:** By approval only; Grade 10 students may be considered on a case-by-case basis.

This course is designed to teach students graphic design, layout, photography, and publishing while creating the school yearbook. It is a hands-on practical course with the students using the computers on a regular basis.

### **YEARBOOK II** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 1.0 (full year course)

**Prerequisites:** By approval only; Successful completion of Yearbook I.

This course is designed to teach students graphic design, layout, photography, and publishing while creating the school yearbook. It is a hands-on practical course with the students using the computers on a regular basis.



## ARTS

### **CULINARY ARTS I & 2** \*Course not offered every semester

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This course is designed to teach students home management, which is sanitation, nutrition, safety in the kitchen, variations of different cooking methods, food presentation, food poisoning, refrigeration, introduction to different types of herbs and spices. It's a hands-on practical course with the students following recipes from scratch.

### **CULINARY SCIENCE** \*Course not offered every semester

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This course consists of practical training in the kitchen as well as some organized field trips to introduce students to the industry. The students will learn knife skills, basic food preparation techniques as well as practical sanitation skills. Classroom discussions will center on selected topics from a range of Cuisines around the world, eating a sustainable diet, the slow food movement and healthy choices to last a lifetime, just to name a few. We will also incorporate numerous exercises in seasoning and food pairing as well as ingredient taste-perception lessons to heighten a student's awareness of these concepts in order to develop each student's individual palates.

### **GENERAL ART** (previously called 2D ART)

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

Students will be exposed to works from different historic periods and then asked to create work reflecting the styles of these periods. This course is also a critical thinking course in which students will be asked to analyze and critique works from various genres of art. Students will also develop a range of basic art skills, and be encouraged to find creative solutions for a wide range of different types of projects.

### **ADVANCED ART** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This is an advanced art course in which students will be expected to create expressive; high quality; artwork using various artistic techniques. At the end of the semester students will be asked to employ the techniques learned during the semester to create a major final project. Students are graded on creativity, quality, and correct use of technique. This is a hands on course in which students will be able to create art using basic tools.

### **INTERIOR DESIGN** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This course provides an introduction to the processes of interior design and the various aspects and considerations involved in the practice of both residential and commercial design. The course acquaints the student with the profession of interior design including: design basics, planning, materials and elements, furniture, textiles, color, art and accessories, kitchens and bathrooms, public spaces, human factors, working methods, systems, and business practices.

### **DRAMA I & II** \*Course not offered every semester

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

The HS Drama course at ABS provides an exciting opportunity to explore many different theater practitioners and theatrical genres from horror to clowning! The course is extremely practical and students will take part in many workshops, rehearsals and performances.

## PHYSICAL EDUCATION

### **PHYSICAL EDUCATION / HEALTH**

**Grades:** 9, 10, 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This course is designed to give students the opportunity to learn through a comprehensive sequentially planned Physical Education program. Students will be empowered to make choices, meet challenges and develop positive behaviors in fitness, wellness and movement activity for a lifetime. Emphasis is placed on students analyzing skills for effective movement. Units of instruction include: introduction to physical education, health, fitness, and aquatics. **Elective course for 11<sup>th</sup> and 12<sup>th</sup> grade students.**

### **STRESS MANAGEMENT** \*Course not offered every semester

**Grades:** 11, 12; **Credit:** 0.5 (semester course)

**Prerequisites:** None.

This is a practical stress management course designed to show students how to reduce stress by managing pressure better. They will learn how to stay more in control of themselves as pressure increases so that they can still perform well and achieve results. Students will also learn how to relax quickly in any situation, keep their energy and confidence high, and begin to achieve the school/home/life balance they want.



## ADVANCED COURSES\*

*\*Advanced courses are only offered based upon demand.*

*For all advanced/AP courses, students must pay a supplemental fee to take the AP exam in May.*

### AP ENGLISH LANGUAGE & COMPOSITION

**Grades:** 11, 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *Approval from English Department.*

Students in this introductory college-level course read and carefully analyze a broad and challenging range of nonfiction prose selections, deepening their awareness of rhetoric and how language works. Through close reading and frequent writing, students develop their ability to work with language and text with a greater awareness of purpose and strategy, while strengthening their own composing abilities. Course readings feature expository, analytical, personal, and argumentative texts from a variety of authors and historical contexts. Students examine and work with essays, letters, speeches, images, and imaginative literature.

### ADVANCED ENGLISH LITERATURE & COMPOSITION

**(AP upon completion of audit process)**

**Grades:** 11, 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *Approval from English Department.*

This course is designed to teach beginning college writing through the fundamentals of rhetorical theory, and follows the curricular requirements described in the AP English Course Description.

Each lesson will include discussion about some vital aspect of writing, including: invention and the artistic proofs (ethos, pathos, logos), disposition or structure, and style (diction, syntax, figurative language, mechanics). The kinds of writings in this course are varied, but include writing to understand writing to explain, and writing to evaluate.

### ADVANCED BIOLOGY

**(AP upon completion of audit process)**

**Grades:** 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *Successful Completion of Biology; Approval of Science Department.*

This course is a comprehensive analysis of general biology that includes biochemistry, molecular biology, genetics, history of biological diversity, plant and animal form and function and ecology. The course is designed to be the equivalent of a college introductory biology course usually taken by biology majors or pre-medical students their first year.

### ADVANCED CHEMISTRY

**(AP upon completion of audit process)**

**Grades:** 12; **Credit:** 1.0 (full year course)

**Prerequisites:** *Successful Completion of Chemistry; Approval of Science Department.*

This course is designed to be the equivalent of a first year college general chemistry course and follows the College Board's AP Chemistry syllabus. This course presents a rigorous treatment of the following concepts: the nature of matter, gas laws, thermodynamics, stoichiometry, bonding, chemical kinetics, chemical equilibria, and more.