

# **Rift Valley Academy Course Offerings by Department**

## **2016-2017**

### **Communications and Information Technology (CIT)**

No area in our school (or in our world for that matter) changes more than the area of technology. We see technology and communication skills as essential for students to complete their high school work. Many students are gaining skills in the elementary grades and the US “No Child Left Behind” standard calls for all students to be technologically literate by grade 8.

With these developments in mind, RVA ensures that students enrolled during grades 7, 8, and 9 take a term length course in Communications and Information Technology each year. There will be some overlap of material each year with more intensive material covered in grade 9. If students come into RVA from another school situation during that time or they are on “home-assignment” for one of those years, we expect this approach to ensure that by the end of grade 9 all students will have had the opportunity to master the technology proficiencies currently required for graduation.

#### **Meeting the computer competency graduation requirement:**

- **Students in grade 9 next year** will automatically be enrolled in Computer 9 and will meet the computer proficiency requirement through that course.
- **Students in grade 10, 11, or 12 next year**, who were at RVA in 9<sup>th</sup> grade, are assumed to have met the proficiency requirement in their Computer 9 course. Any student who was not here in grade 9, did not take the Computer 9 course, or did not take an equivalent course from another school must make arrangements through the CIT Department Head to meet their computer competency graduation requirement.

#### **Visual Communications:**

This integrated course is the cornerstone of the department. It is designed to enable students to use computers and other technology to effectively, creatively, and efficiently collect, process, and present information in a variety of formats. The course covers the same material presented in three separate term length courses, but enables the student to block them into their schedule during a different period, thus giving them the opportunity to take other term lengths. The three courses bundled as the Visual Communications course are Graphics and Design, Introduction to Web Design, and Photography. The course prepares students to communicate and problem-solve effectively in our technological world and it meets the pre-requisite for the Yearbook course. The course is available to students in grades 10 through 12.

#### **Term Length Courses:**

Students in grades 11 and 12 may take the following term length courses. Students who have already taken Visual Communications may not take Graphics and Design, Photography, and/or Introduction to Web Design since very little new material is covered in those courses.

- **Graphics and Design** - This course teaches the essentials of good visual communication. The focus is on elements and principles of design and typography while developing proficiency with two main types of design tools; a vector drawing program (Illustrator) and page layout and design tools (InDesign). This course is NOT open to students who have taken Visual Communications.

- **Photography** – This course concentrates on the principles of good image making using the medium of digital photography. Students learn basic camera control, image processing and digital manipulation techniques using Photoshop. Emphasis is placed on creative composition and ways of seeing. The ultimate goal is for students to be able to use images as a means of purposeful communication. This course is NOT open to students who have taken Visual Communications.
- **Photography II** – This course extends the principles and skills learned in Photography or in the Visual Communications course (*prerequisites*). Students in this course develop advanced skills and understanding of image making such as improved portrait, action, macro, and still-life photos, as well as more advanced and artistic editing techniques.
- **Introduction to Web Design**- Students will learn to design and publish pages for the World Wide Web. Topics include HTML, CSS, design principles, preparing graphics, animations, and other content for use in Web pages, and using tools to develop entire websites that could be published on an Intranet or the Internet. This course is not open to students who have previously taken Visual Communications.
- **Videography**- Students will learn the basics of video production, including storyboarding, scriptwriting, shooting, editing, music and sound effects. While students will develop technical skills as they produce and edit with computer equipment, the primary focus is on communication and story telling with the video medium.
- **Personal Finance** - Course is designed to help a person manage their finances. The course will cover budgeting, banking, savings plans, loans, credit cards, health insurance, car insurance, life insurance, taxes, tax-sheltered annuities.

## **Yearbook**

This course is focused on producing the RVA Yearbook by employing and extending the skills developed in Photography, Graphics and Design, or the Visual Communications courses. Students will be involved in pre-press production using the tools of electronic graphic design with many opportunities for creative expression. This course is open to students in grades 10-12 who have met the prerequisites. Prerequisite: Photography **and** Graphics and Design; **or** Visual Communications.

## **AP Computer Science**

This course focuses on the programming concepts required to prepare students to take the AP Computer Exam offered in May. This course focuses on helping students learn to use a professional programming language to build computer applications and solve increasingly complex problems. The course is highly abstract and symbolic and students taking it should have strong problem-solving skills.

## **English Department**

### **9<sup>th</sup> Grade English**

Grade Nine English is a required course for graduation from RVA and is the foundational course for high school English. It is also the stepping stone from junior high English to the secondary level. As such it continues the emphasis on writing and reading while further developing literary analysis skills laid down in junior high. A heavy emphasis is placed on ordering essays and essay questions, and the beginnings of research papers are taught. The class will focus on developing interpretive skills for the different literary genres while using the foundation of literary elements. Grammar and vocabulary are taught in correlation with reading and writing so that the skills which are being taught are then being used immediately.

## **10<sup>th</sup> Grade English**

Grade Ten English is also required for graduation from RVA and moves into increasingly more complex and sophisticated analysis of literature and writing. The study of genres will continue as well as the study of other wide ranging works to allow the student to study and interpret a variety of styles, characters, settings, language, time periods and worldviews. Students will continue to write as a means of analyzing and responding to literature. Grammar and vocabulary continue to be taught in correlation with reading and writing so that the skills which are being taught are then being used immediately. Vocabulary will include SAT preparation as well as new words encountered within texts.

## **11<sup>th</sup> Grade English**

Grade Eleven English is also a required course for graduation from RVA; however, juniors may choose to take AP American Lit in its place (see below). The emphasis in Grade Eleven English is a survey of American Literature. This course will introduce the historical and philosophical contexts of the literature as well as its themes and its various forms. The primary focus is on the American Dream and how it motivates all the writers in all the movements in American Literature. Each piece of writing will be analyzed based on how that author saw the American Dream and what worldview they are espousing. Each student will conduct a year long study into the life and works of an American author, during which they will write a research paper on the life of their author; an analysis of their works; and prepare a fifteen minute presentation for the class. The desire is to have students reading a variety of texts with authors of differing race, gender, time periods and background in order to define the American Dream. (Students taking U.S. History concurrently with this Grade Eleven English is ideal.)

## **12<sup>th</sup> Grade English**

Grade Twelve English is also a required course for graduation from RVA. The focus of Grade Twelve English is a survey of English Literature. Specific periods of literature, important authors and literary works will be studied within the context of the chronological history of Great Britain. The overarching theme of the year is values, and students will consider what was valued in each of the time periods studied as well as considering the worldview of the authors under discussion. Due to the extensive amount of literature to be covered, a primary focus will be the selected excerpts contained in the literature anthology. A particular emphasis will be placed on more sophisticated approaches to literature and personal writing. A final senior project will be the culmination of each student's life to date. Grammar and vocabulary continue to be taught in correlation with reading and writing so that the skills which are being taught are then being used immediately.

## **AP English Literature**

The emphasis in AP English Literature is similar to English 11, in that it is a survey of American Literature. This course will also introduce the historical and philosophical contexts of the literature as well as its themes and its various forms. The primary focus is on the American Dream and how it motivates all the writers in all the movements in American Literature. Each piece of writing will be analyzed based on how that author saw the American Dream and what worldview they are espousing. Each student will conduct a year long study into the life and works of an American author, during which they will write a research paper on the life of their author; an analysis of their works; and prepare a twenty minute presentation for the class. The desire is to have students reading a variety of texts with authors of differing race, gender, time periods and background in order to define the American Dream. This is a rigorous course for which students may be able to receive college credit, based on their score on the AP Exam. It is a first-year college course, and students are expected to take the AP exam upon completion of the course. There are two English AP exams offered each year: Literature and Composition as well as Language and Composition. Students may take either or both exams; the teacher will assist students in choosing the exam on which they have the best chance of success. *Prerequisites: English 10 with at least an "A-" and signature of current English teacher or department head. See your current English teacher for the needed permission slip.*

## AP English Language and Composition

Although RVA does not offer a yearlong AP English language course, the English department can help prepare students (senior students are especially equipped to take this exam) for the May test. This exam focuses on students' understanding of nonfiction works (including expository, argumentative, analytical, and personal texts from various authors and time periods), rather than the fictional focus of the AP English literature exam. Skills in close reading, applying rhetorical strategies, analyzing source texts, and writing arguments are emphasized.

### Term Length Courses:

- **Creative Writing** – Students will be given the opportunity to develop their creative abilities with a variety of different assignments. Using the writing process students will be given the opportunity to write in a variety of styles, including children's book, scripts, poetry and short stories.
- **Film as Literature** – When a movie is made, the director has a message they are sending—can you identify the message? In this class, students will watch movies and discuss the worldview which is being presented as well as identify the elements of filmmaking and how they are being used.
- **Lewis and Tolkien** – “The dominant form of literature in the 20<sup>th</sup> Century has been the literature of the fantastic” (T. Shippey, *Tolkien: Author of the Century*). In this course, students will examine the life and writings of two of the most influential fantasy writers of the 20<sup>th</sup> Century. The class will also examine who and what influenced them as well as authors whom they influenced. This class will be organized around the major themes found in the writings of Lewis and Tolkien
- **Speech and Debate**—This course is designed to give students the opportunity to express themselves in front of their peers. It will teach the basic skills of public speaking and some debate tactics. Students will present several different types of speeches as well as critique their classmates. The skills of articulation will aid in college and future success.
- **Journalism**—This rapidly changing field is nevertheless essential towards creating an educated populace for the democratic world. Students will study the basics of traditional journalistic writing while also contemplating ethical issues surrounding the field. Newer digital forms of media will also be covered, and students will also publish some of their work for public display.
- **English Language** - This term length course is a continuation of English 10, and is available in second term only. The course develops the following skills: understanding texts; understanding how writers achieve effects; summarizing; argumentative writing; and descriptive/narrative writing. This course meets the requirements for the IGCSE exam taken in May. It is open to non-IGCSE students, however, who may be interested in developing these skills. IGCSE students must take this course in their 11th grade year.
- **Rhetoric and Argument** - Designed as a preparatory course for seniors desiring to sit for the English Language and Composition AP exam, this course will polish skills learned in AP English during their junior year. Rhetoric is the art of effective or persuasive speaking or writing, especially the use of figures of speech and other compositional techniques. Over the course of the term, students will read and analyze a variety of non-fiction texts. The desire is to have students reading a variety of texts with authors of differing race, gender, time periods and backgrounds in order to be able to think critically about what they read. This is a rigorous course for which students may be able to receive college credit, based on their score on the AP Exam. While the homework load for this course will not be equivalent to a regular AP course, students can expect a few nights of homework a week and are expected to take the AP exam upon completion of the course.

## **Fine Arts Department**

### **Art Survey**

Students in this full year course are taught a new way of seeing by tapping the special functions of the right hemisphere of the brain to enable realistic drawing skills. This course is for any student who desires to draw well regardless of ability or past experience. Instruction is given in perceiving shapes, seeing relationships, developing perspective, determining lights and shadows, drawing portraits, and using color. The mediums used include pencil, charcoal, pen & ink, color pencil, crayon, oil pastel, painting and watercolor. Text: *Drawing on the Right Side of the Brain* by Betty Edwards. *This class is limited to 20 students.*

### **Advanced Art I, II**

The students will develop and improve in their experience in drawing and painting as well as learn new art forms in the area of pottery & sculpture. The course is divided into two parts: a) Drawing and Painting (two-dimensional) b) Pottery & Sculpture (three-dimensional), and areas of Concentration. Advanced Art II students will work on their portfolios and may design a specialized curriculum upon approval. This class is limited to 12 students. *Pre-requisite: Art Survey or Department Head approval.*

### **AP Music Theory**

This course is designed to cover the equivalent of a two-semester college theory course and prepare students to take the Advanced Placement exam in May. Emphasis is placed on ear training, composition and basic analysis of music. *This course is offered only if there is qualified staff available.*

*Prerequisite: Music Theory and/or instructor permission.*

### **Choir**

Choir is primarily a performance group. Daily rehearsals are intended to prepare the student for singing in public. Class time is spent learning notes, words, proper diction, blend, balance and good stage presence. The Choir usually performs a few Sundays each term and has one large concert at the end of each term. A variety of music will be studied. Sight-reading, notation, and terminology are taught within the context of the songs being studied.

*Audition is required. Grades 9-12. One credit. RVA choir members who will be returning Term I and wish to continue in choir should pre-register. Others should indicate Choir as an Alternate and they will be auditioned at the end of Term III or the beginning of Term I.*

### **Concert Band**

Concert Band is open to any students 7-12 but primarily for grades 7-8. This class allows the student to develop fundamental skills on a band instrument. Students get to study basic music theory, history, style, and music ministry all in the context of performances which are usually held at the end of each term. Students are expected to attend rehearsals during the class day, practice individually, and complete various written assignments. Students are asked to wear white shirts with black trousers for guys and black skirts for girls.

### **Wind Ensemble**

The goal of this class is to develop independent musicians who can perform in the college and post graduate settings. The class is a half credit class that meets 2 and ½ times a week. The students are able to learn advanced music techniques as well as touch on areas of theory, history, ministry, and various styles. Students must audition for the class and maintain proper effort to be a part of this ensemble. Students are required to practice individually, complete various written assignments, and participate in all performances. Students should have their own proper dress of white shirts with black and khaki trousers for guys and black and khaki skirts for girls.

### **Term Length Courses:**

- **Pottery** – Students will learn the basics of clay and emphasis will be given to basic potter's wheel techniques. Firing and glazing of individual pieces will be learned. The course may be taken more than one term with teacher approval and is limited to 18 students.
- **Music Theory** – This is a term length course that explores fundamentals of music theory, conducting, ear training and composition. Students must be able to read music in at least one clef. There is a placement test that can be emailed upon a request via email to [music@rva.org](mailto:music@rva.org).

## **Life Skills Department**

### **Home Ec. 9**

This is a required 9th grade variety class taken for one term. Half a term is spent on cooking with the other half term spent on sewing.

### **Wood Tech I (9-12)**

This is an introductory woodworking course designed to develop basic competencies regarding the identification and use of various hand and power tools as they relate to problem solving and project fabrication. This high school course is the next step up from the junior high wood tech courses. You can still take this course if you were not here in the junior high.

### **Wood Tech II (10-12)**

This is an advanced level woodworking course which focuses on more complex hand-tool and machine operations. Specialized functions that require the use of jigs and fixtures will be emphasized. Product design and function will be highly emphasized. Woodworking as it relates to the wood furniture and design industry will also be taught. *Prerequisite: Wood Tech. I.*

### **Wood Tech III (11-12)**

Wood Tech III is a very advanced woodworking course. This class can be taken as an independent study or a regular class and is offered for very select students who have achieved an A average in Wood Tech I and II or received consent from the instructor. The building of custom projects for self or for the school will be stressed. How to price, form a vendor list, and how to produce a custom product for a customer will be emphasized. Product design and function will be the focus. Please see woodshop teacher for details. Seniors have priority over others. *Prerequisite: Wood Tech I and II.*

### **Wood Tech IV (12 only)**

Wood Tech IV is a highly advanced course. This design wood class may teach students the use of CAD drafting and design to develop custom furniture and cabinets for the use of others, yourself, and /or our school. The course will take the student to a high level of woodworking competency that will open up opportunities for university training in the areas of design, production, and business. Customer service will also be taught. *Prerequisite: Wood Tech I, II, and III.*

### **Term Length Courses:**

- **Advanced Auto Mechanics (11-12)** This course reviews the concepts learned in the Intro course and then moves into more advanced concepts. *Prerequisite: Intro to Auto Mechanics.*
- **Advanced Cooking (11-12)** - A term length course in cooking: This course is the next level cooking class after the Home Ec. 9 course and focuses on more detailed menus and the needed skills to produce nutritional as well as tasty entrees in meal preparation. This class is designed to enhance your cooking skills whether you are just above a beginner or you have had some experience at home.
- **Introduction to Auto Mechanics (11-12)** - An introductory course in the care, servicing and repair of the systems of automobiles and light trucks. Shop safety, proper use of hand tools,

power equipment, air tools, lifts, and fumes will be strongly emphasized. Work habits and attitude will be part of this unique course. This is a hands-on class with a limited number of participants.

- **Driver's Education (11-12)** - This course will include classroom instruction and behind the wheel experience. You will learn the written rules of the road, road safety, responsibilities of being a driver, and the privilege of being permitted to take the wheel of an automobile as a licensed driver. Car insurance companies in North America often give reduced insurance rates for good grades and evidence of having taken Driver's Education on your high school transcript.

## **Mathematics Department**

### **Math 7**

The Math 7 course is designed to provide a thorough review and extension of the many mathematical topics learned in elementary school. Connections between various mathematical topics and applications to real life are emphasized as students improve their basic mathematical skills. Students are gently led from concrete mathematical ideas to an introduction to the abstract concepts of Algebra in preparation for Math 8. Active learning with manipulatives, projects and group discussions are an integral part of this course. This course is designed for the average 7<sup>th</sup> grade student. Seventh grade students who are strong in mathematics are encouraged to take Math 8, as noted in the Math 8 course description.

### **Math 8 (Pre-Algebra)**

A large portion of the Math 8 course is devoted to preparing students for Algebra I, essentially making this a Pre-Algebra course. After completing the course, students should be well prepared to handle abstract concepts. Topics in geometry and probability round out this course. This is the typical course for an 8<sup>th</sup> grade student. A 7<sup>th</sup> grade student must have an "A" in 6<sup>th</sup> grade math, an acceptable score on the Algebra Readiness Test, and written consent from his/her parents to take Math 8. This course could also be offered to some 9<sup>th</sup> grade students who desire an additional year to gain a deeper understanding of mathematics, to upgrade their arithmetic skills, and to be motivated to achieve. It is intended that a student will go on to pass Algebra I reasonably well in his/her sophomore year. This course does not count toward a College Prep RVA Diploma.

### **Algebra I**

The Algebra I course is designed to emphasize basic concepts of Algebra in a variety of forms or perspectives – graphical, tabular, algebraic and verbal. Core algebraic ideas such as linear equations and inequalities, quadratic equations, functions and rational expressions are thoroughly developed. Traditional, systematic, step-by-step computations and logical thinking are combined with problem solving and development of reasoning skills. Additional topics such as data analysis and probability are also covered. Typically offered in the 9<sup>th</sup> grade, Algebra I is a core mathematics course required for all students. An 8<sup>th</sup> grade student must have completed Math 8 with an "A" average or must have an "A" in Math 7, an acceptable score on the Algebra Readiness Test, and written consent from his/her parents to take Algebra I.

### **Geometry**

The Geometry course is designed to introduce Euclidean geometry using an inductive approach. Strong emphasis is placed on logical thinking and reasoning, recognizing that this forms the basis for western philosophy. Various projects throughout the year help to show the connections between geometry and other disciplines. Typically offered in the 10<sup>th</sup> grade, Geometry is a core mathematics course required for all students. A 9<sup>th</sup> grade student wishing to take Geometry should have successfully completed Algebra I with at least a "B+" average.

## **Algebra II**

Algebra II introduces many more advanced topics in mathematics. Basic algebraic ideas are reviewed as students refine their algebraic skills and develop an understanding of how to handle a variety of complex problems. Many new ideas include polynomial, exponential, logarithmic and rational functions; matrices; conic sections; probability; sequences and series. Graphing calculators are essential to the class and are required for all students (information on recommended models is available from the mathematics department). Typically offered in the 11<sup>th</sup> grade, Algebra II is an important course for college-bound students. It is an essential course for almost every college major. Students taking Algebra II should have at least a “C” average in both Algebra I and Geometry. A 10<sup>th</sup> grade student wishing to take Algebra II should have completed both Algebra I and Geometry with at least a “B+” average. In special circumstances, Algebra II and Geometry can be taken concurrently, requiring the approval of the Math Department Head.

## **Pre-Calculus**

The Pre-Calculus course further extends many of the topics introduced in Algebra II, emphasizing reasoning and communication based on complex mathematical ideas. Additionally, an entire term is devoted to the foundations of trigonometry. Students completing the Pre-Calculus course should be well prepared for Calculus. Graphing calculators are essential to the class and are required for all students (information on recommended models is available from the mathematics department). Typically offered in the 12<sup>th</sup> grade, Pre-Calculus is a necessary course for many students intending to major in a mathematical or scientific field and is recommended for most other majors. Students taking Pre-Calculus should have a least a “B” average in Algebra II. A student with a “C” average may be permitted to take the course, but must have approval of the Mathematics Department Head.

## **AP Calculus AB**

Calculus is normally a first year college course and at RVA it is taught as an Advanced Placement course. Students who do well on the Calculus AB Advanced Placement exam may be granted college credit for one or two semesters of Calculus. Concepts and applications of Calculus including limits, derivatives, and integrals are covered. Emphasis is placed on being able to thoroughly understand the conceptual ideas of Calculus along with being able to perform the calculations and analysis. Graphing calculators are required for both the class and the AP exam (information on recommended models is available from the mathematics department). Typically taught in the 12<sup>th</sup> grade, Calculus is necessary for all higher-level math courses in college and is basic for many engineering and science courses. Students taking Calculus AB should have a least a “B” average in Pre-Calculus. A student with a “C” average may be permitted to take the course, but must have the approval of the Mathematics Department Head.

## **AP Calculus BC**

Calculus BC includes all of the topics covered in the AB course in greater depth plus polar and parametric equations, vector functions, sequences and series. It is the accelerated Advanced Placement Calculus course. Students who do well on the Calculus BC Advanced Placement exam may be granted college credit for one to three semesters of Calculus. Graphing calculators are required for both the class and the AP exam (information on recommended models is available from the mathematics department). Typically taught in the 12<sup>th</sup> grade, Calculus is necessary for all higher-level math courses in college and is basic for many engineering and science courses. Students taking Calculus BC should have a least an “A” average in Pre-Calculus. A student with a “B” average may be permitted to take the course, but must have the approval of the Mathematics Department Head.

## **Statistics**

Statistics is frequently required for college majors such as social sciences, health sciences, and business. This projects based course will introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data with a focus on four main conceptual themes: exploring data, sampling and experimentation, anticipating patterns and statistical inference. Typically taught in the 11<sup>th</sup> and 12<sup>th</sup> grades, Statistics can serve as an alternative math credit for students who do not need Pre-



Calculus or Calculus or as an additional math course for students considering humanities majors. A student should have completed Algebra II with at least a “C” average to enroll in Statistics.

## **AP Statistics**

AP Statistics will follow the same basic outline as the Statistics course but will be more rigorous to prepare the students for the Advanced Placement exam. Students who successfully complete the course and exam may receive credit, advanced placement, or both for a one-semester introductory college statistics course. Students will be introduced to the major concepts and tools for collecting, analyzing and drawing conclusions from data while focusing on four main conceptual themes: exploring data, sampling and experimentation, anticipating patterns and statistical inference. Typically taught in the 11<sup>th</sup> and 12<sup>th</sup> grades, AP Statistics can serve as either an alternative math credit for students who do not need AP Calculus or as an additional math course for any student. A student should have completed Algebra II with at least a “B” average to enroll in AP Statistics.

**NOTE:** *Students who wish to take two math courses in the same year must have the approval of the Math Department Head to do so.*

## **Term Length Course:**

- **Trigonometry** – This advanced math course is for seniors who have had Algebra II but are not in Pre-Calculus. The focus is exclusively on trigonometric functions and applications of trigonometry. Students in the 11<sup>th</sup> grade and Algebra II may take this course in lieu of Pre-Calculus in order to take Calculus in the 12<sup>th</sup> grade. In order to be considered for this option, students must obtain approval from the Mathematics Department Head.

## **Science Department**

### **Conceptual Physics**

Usually taken in 9th grade, this is an introduction to chemistry and physics and is useful for those planning on taking chemistry and/or physics. This is a lab course, so emphasis is on learning by doing. Many activities are incorporated which develop laboratory skills and are geared toward increasing interest in the physical sciences rather than simply learning a large collection of scientific facts. Topics include physical and chemical changes, mixtures, kinetic theory, heat, phase changes, atomic structure, radioactivity, mechanics, static and basic current electricity, magnetism, sound and light..

Conceptual Physics, Biology, Chemistry and Physics are the college prep courses for high school students. Students wishing to take both AP sciences (AP Biology and AP Chemistry) in addition to the regular college prep curriculum may opt to skip Conceptual Physics and take Biology in their 9th grade year. These students must fill out a science department contract in which they agree that they will complete 4 years of sciences. This would include at least one AP course. The students must also have a recommendation from their eighth grade math and science teacher and an “A” average in both their math and science courses with preference given to students in Algebra I as eighth graders. It is recommended that a student who wishes to opt out of Conceptual Physics also be on the accelerated track for math and therefore taking Algebra II at the same time as Chemistry. **If a student taking Biology in their 9<sup>th</sup> grade year does not maintain an “A” average for the year they will take Conceptual Physics their 10<sup>th</sup> grade year and not move on to Chemistry.**

### **Biology**

Usually taken in 10th grade, Biology is a college preparatory course and is designed to be a complement of Life Science offered in grade 7. Life and the complexity of living things are studied at the molecular, cellular, system, and organ levels. Special emphasis will be on the more conceptually difficult ideas of biology such as molecular biology, biochemistry, photosynthesis/respiration, protein synthesis, genetics,

the degree of change in organisms over time, and the issue of the origin of life. The last term will compare and contrast human physiological systems with those of other organisms. This is a lab course.

## Chemistry

Usually taken in 11th grade, this course is a study of the materials that make up the world around us and how they interact with each other. Much time is spent in the lab investigating chemical reactions, analyzing how chemicals combine, the rates of reactions, energy changes, and phase changes. The basic structure of matter is looked at in detail to explain the rules behind chemical reactions. An interesting variety of chemical products will be made in the lab by the students during the course.

*Prerequisites: Conceptual Physics and Algebra I with a "C" or better; or consent of instructor. It is recommended that a student either be enrolled in or finished with Algebra II at the time of taking Chemistry. Some students may skip Conceptual Physics and enter Chemistry if they have "A's" in both Algebra I and Biology. See above for clarification.*

## AP Biology

This is a college-level course and is very demanding. The AP Biology College Board syllabus is followed to provide good preparation for taking the AP exam. The course is a double period one term (likely second term 2016-17) to facilitate getting through the material and completing the required lab work. Students who score well on the AP test may receive up to a full year's credit for biology when they go to college/university. Students are expected to take the AP exam upon completion of the course. *Prerequisite: Biology I, with a minimum grade of "B" or permission of the department head. Chemistry must be taken before or with Advanced Biology.*

## AP Chemistry

This is an advanced Chemistry course that will follow regular Chemistry. This course is ideal for those who wish to major in the sciences in college or receive college credit with a qualifying score on the AP exam. A double period will be required in one RVA term (alternating years of first or second term). This is a first year college level course and students are expected to take the AP exam upon completion of the course. *Prerequisites: Regular Chemistry with at least a "B" and consent of the department head.*

## Physics

Usually taken in 12th grade, this course explores how the world around us works. During this course we will explore classical physics topics like Newtonian mechanics, electricity, magnetism, and wave phenomena. We will study how and why things move: things as diverse as people, bullets, and roller coasters. Sound and light will also be investigated so as to explain topics from sonic booms to room acoustics to the wave-particle duality of light. The course will also involve analysis of electricity, magnetism, and the connection between electricity and magnetism so students will understand things like motors and generators. The course has laboratory experiences designed to bring a higher level of understanding of the different phenomena. Physics is a college preparatory course. It is strongly recommended for all students as a part of a well-rounded liberal arts education and to satisfy the deep longing that exists in humanity to know how things work. *Prerequisites: Algebra II or a demonstrated aptitude in basic math. Chemistry is strongly recommended. Students who have not taken Chemistry should obtain department head approval.*

## Term Length Courses:

- **Tropical/Third World Medicine** – Topics included in this class will include principles of health care (prevention, diagnosis and treatment of disease), specific illnesses in tropical settings, and special problems of third world/tropical medicine.
- **Environmental Science** - Students will apply Biblical principles and a Christian world view into the study of the environment. They will also explore environmental problems (both local & global) and their likely causes. They will examine alternative solutions to solve and prevent these problems. The course will incorporate chemistry & biology into topics such as management of waste, use of resources (i.e. water), and global energy demands.

## **Social Studies Department**

### **Modern World History**

This course is designed to give students an in-depth study of History during the Modern era. Students will evaluate the patterns of interaction between people and events from the late 16th century to the present, and develop the skills and knowledge base to be able to analyze turning points in history, relate them to the issues of today, and to think critically about the effects the past has had on our world. The course is designed for the average 10th grade student. Ninth grade students who are STRONG in Social Sciences, completed their 8th grade Social Studies course with an “A” average, and have been granted recommendation of the Department Head are encouraged to take this course. This course is strongly recommended for all students within their High School career.

*Prerequisite: for 9th graders – Recommendations of the Department Head and previous 8th grade History teacher are REQUIRED for eligibility. The student is asked to obtain this approval before he/she registers. Approval will not be given unless an “A” average has been attained or (for new 9<sup>th</sup> students) a passing grade on the Modern World History Readiness Test.*

### **AP World History**

The tenth grade Advanced Placement World History course begins with 600 BC and reaches its completion in present day. The class will be broken down into manageable periods throughout the year and will focus largely on the mastery of skills needed for the AP exam in May. Students will examine themes, patterns, and processes from a global perspective in order to develop a greater understanding of various societies throughout human history. Emphasis will be placed on the analysis of primary and secondary sources, an understanding of the principle themes in World History, an ability to analyze historical evidence, and the ability to express that understanding and analysis in a variety of forms (including discussions, essays, debates and tests). Students who successfully master the course material may earn college credit by passing the annual AP World History exam. While students have the opportunity to earn college credit, the purpose of this course extends beyond the exam. This course will also offer students the opportunity to develop a skill set and knowledge base that will be a useful foundation for their continuing education. The AP board allows this course to be taken at the 10<sup>th</sup> grade level provided that the student is academically prepared. Offering it at this young level allows for a student to set a foundation early on for their future AP interest in other disciplines.

*Prerequisite: Modern World History.*

### **United States History**

A course required for all US Citizens. Students will examine important figures, events, and ideas that helped shape the United States from the Reconstruction Period through modern history. Students will explore the political, social, technological, and economic factors that have developed and formed the United States into what it is today. This course is designed for the average 11th grade student. 10th grade students wishing to take this course must have already completed Modern World History.

*Prerequisite: Modern World History.*

### **Government/Economics**

This course is designed to give the student an understanding of the functions and integral workings of government and politics. Using the US Government as a basis, students will study the basic foundations of government and politics along with the comparative study of other world countries. An introduction to the study of macro and microeconomics will also be covered.

*Prerequisite: Modern World History. This course is open to students in 11th and 12th grades.*

## Canadian Studies

A course required for all Canadian Citizens. This course covers Canadian history, government and geography from the early explorers of Canada to present day. It is offered to grade 10-12 students on a biyearly basis. *(Potentially scheduled for 2017-2018)*

## Current World Issues

This course involves presentation of Current Issues dealing with World problems and issues, discussion of these issues in class, research and presentation of materials about present issues. Course includes use of various news periodicals, Internet resources, and guest speakers. The course attempts to give students an awareness of present pressing and present world problems within a Christian perspective and response. This course is open to students in 11th and 12th grades.

## Term Length Courses:

- **Psychology** – In this introductory course students are exposed to the foundational theories of psychology, psychotherapy, and pertinent issues related to psychology. Students examine various aspects of this subject within a framework of Biblical and Christian comparison. *Sophomores may be able to take this course but must obtain Department Head permission to do so.*
- **Model United Nations** – MUN is a class in which students learn about the way the UN works. They have the opportunity to learn about and represent a specific country in a four-day session of an actual Model UN held in Nairobi. This is a good opportunity to develop and practice leadership skills, research skills, debating skills, interview skills, and caucusing skills. *Course numbers are limited and students must obtain application forms and be approved by the MUN teacher and Social Studies Department Head to be admitted.*
- **African Cultures**– This course is designed to help RVA students from all backgrounds have a better knowledge and understanding of Africa. It will provide a foundation in African geography, religions, history, and culture. A general focus will also be given to the pressing problems in Africa today. There will be a mixture of lecture, self-study, guest speakers, and “hands on” experiences within the course.

## World Languages Department

Here are a few thoughts to help you choose which language to take in high school:

**Swahili** is one of our three language options. It is an excellent language to study for those living and working in East Africa. Also, many of our students come in with a good oral command of the language and continuing formal classes will improve and enhance their written skills. The one drawback to Swahili is that we offer only 3 years and some colleges want to see 4 years of a language in high school. Also, it can be difficult to continue studies in college as there are a limited number of colleges that offer Swahili. Some colleges may not accept Swahili taken in high school to fulfill their language requirement. There are colleges that offer a comprehensive test of Swahili for which you can receive college credit, although these are not offered by either RVA or the AP program.

Our **French** program is well-established and includes AP French Language and Culture as the final level. French is an excellent language if you are interested in international business or ministry outside of the Americas, particularly in West Africa, as it is spoken by 200 million people worldwide. It is one of the official languages of such organizations as the UN, the International Red Cross, NATO, and even the International Olympic Committee. In order for students to successfully complete the AP, it is usually necessary that they have previous experience in French.

The **Spanish** is becoming the “obvious” language choice for those who plan on returning to or living in the Americas. Spanish is spoken throughout the U.S. as the number of Hispanics continues to grow.

Students studying in North America will have many opportunities for missions trips to Mexico, the Dominican Republic, and other Spanish speaking countries throughout the western hemisphere. If you have an interest in education, ministry, medicine or many other professions, Spanish can be a major asset. It is being required in some States that medical and education professionals understand Spanish in order to receive their professional licenses. Students with a background in Portuguese find Spanish easy, and are able to succeed on the Spanish AP exam.

For progression into all Level II, III, IV, and AP courses in the World Languages Department, students must show proficiency by completing the level appropriate portfolio and receive the teacher's approval in writing.

## Swahili

- **Swahili I** – Welcome to the world of communicating with those around you! Beginning with greetings, a vital aspect of Swahili culture, the student will then learn to introduce him or herself, tell where he or she comes from and so on. Every lesson aims to equip for conversations one is likely to encounter. High priority is placed on training ears and tongue. Essentials of basic sentence structure, tenses, subject and object prefixes and use of the negative are covered in the course. The Swahili system of noun classification and agreement is taught in a methodical logically ordered and structured manner. This class is intended for those with little or no ability to converse in Swahili.
- **Swahili II** – The focus is on increased vocabulary and more complex grammar. Bible readings, songs, and games are all used as well as traditional texts and workbooks. This is probably the class for new students who are fairly conversant in Swahili, but need to learn the grammar.  
*Pre-requisite: Completion of the Swahili I Portfolio and the Swahili I Teacher's Approval*
- **Swahili III** – If offered, the goal of Swahili III is increased proficiency in oral and written communication, as well as listening and reading skills. Students will be challenged to broaden their vocabulary and master and use more complex grammar structures. They will be encouraged to use Swahili regularly in the local community. Please note that this is an upper level course and requires significantly more homework and effort than the Level 1 & 2 courses.  
*Pre-requisite: Completion of the Swahili II Portfolio and the Swahili II Teacher's Approval*

## French

- **French I** – The focus of the French I course is basic vocabulary and grammatical structures that enable the students to carry on basic conversations or write about topics that concern them. Students learn how to talk about events in the past, present, and future. Listening, speaking, reading and writing are all a part of the course. Appreciation for and a better understanding of the French culture are also goals of the course. Videos, songs, skits, games, Bible reading, as well as the traditional text and workbooks are used.
- **French II** – The focus of the French II course is increased vocabulary and more complex grammatical structures so that the students will be able to better communicate their needs, desires, and interests to others. Students learn how to present their thoughts using more verb tenses. Listening, speaking, reading, and writing are equally stressed. An increased appreciation and understanding of the cultures of francophone nations is an important part of the course.  
*Pre-requisite: Completion of the French I Portfolio and the French I Teacher's Approval*

Please note that the upper level courses below are more difficult and require significantly more homework and effort than the Level 1 & 2 courses.

- **French III** – The goal of the French III course is increased student proficiency in oral and written communication, as well as listening and reading skills. The course includes a review of grammatical structures and the presentation of those not yet covered. Students learn more about the art, history, music and literature of France through a variety of readings in the target language and research. Lengthy oral presentations in French are expected at this level. The course takes into account the requirements of the I.G.C.S.E. French Examination and the needs of those who will be working towards AP French the following year.

*Pre-requisite: Completion of the French II Portfolio and the French II Teacher's Approval*

- **AP French Language and Culture** – Designed to be a 300-level college course (college Junior class) in accordance with the AP College Board's requirements, the focus of AP French is preparation for the AP French Language and Culture exam held every May and also furthering proficiency in French to a high conversational and writing level. In preparation, the AP French course studies six (6) themes required by the AP College Board: Contemporary Life, World Challenges, Public and Private Identities, Family and Community, Science and Technology, and Aesthetics. Further, this course is very rigorous and requires students who are 1) self-motivated to learn, 2) willing to strive to produce long essays on thought-provoking topics, 3) and have confidence in speaking in French in semi-professional speeches and in normal conversation. After the AP French exam, the students work on Biblical application of the language to potential uses in children's ministry and sharing their faith through French.

*Pre-requisite: Completion of the French III Portfolio and the French III Teacher's Approval*

## Spanish

- **Spanish I** – The focus of the Spanish I course is learning of vocabulary and grammatical structures that enable the students to carry on basic conversations or write about topics that concern them. Students learn how to talk about events in the past and present. Listening, speaking, reading and writing are all a part of the course. Appreciation and a better understanding of the Spanish culture are also goals of the course. Videos, songs, skits, games, Bible reading, as well as the traditional text and workbooks, are used.
- **Spanish II** – The focus of the Spanish II course is increased vocabulary and more complex grammatical structures so that the students will be able to better communicate their needs, desires, and interests to others. Students learn how to present their thoughts using more verb tenses. Listening, speaking, reading, and writing are equally stressed. An increased appreciation and understanding of the cultures of Hispanic nations is developed.

*Pre-requisite: Completion of the Spanish I Portfolio and the Spanish I Teacher's Approval*

Please note that the upper level courses below are more difficult and require significantly more homework and effort than the Level 1 & 2 courses.

- **Spanish III** – The goal of the Spanish III course is increased proficiency in oral and written communication, as well as listening and reading skills. The course includes an intensive review of grammatical structures and the presentation of those not yet covered. Students learn more about the art, history, music and literature of Hispanic cultures through a variety of reading in the target language. Short stories, poems, plays, and excerpts from larger pieces of literature are introduced. Videos, CDS, songs, skits, games, paired activities and Bible reading, as well as the traditional text and workbooks, are utilized to enhance student learning.

*Pre-requisite: Completion of the Spanish II Portfolio and the Spanish II Teacher's Approval*

- **Spanish IV** – If offered, this class is intended to be a preparation course for the AP Spanish Language and Culture Exam. The focus of this class will be on increasing proficiency with the

Spanish language in all 4 areas of reading, writing, speaking and listening. Advanced grammar will be studied. Classes are conducted in Spanish except when necessary to explain grammatical concepts. The course is thematic with Term 1 focusing on the world of work, recreation, and cultural musical expression. Term 2's themes are travel, immigration from a Christian perspective, and an analysis of Hispanic society. Term 3 will center around art, modes of information gathering, and modern Spanish language and culture. Students will read authentic Spanish materials and classic literature including Miguel de Cervante's Don Quixote de la Mancha and various poems written by Hispanic authors. Strong students will have the opportunity to take the AP exam. This goal will require vacation homework and extra assignments.

*Pre-requisite: Completion of the Spanish III Portfolio and the Spanish III Teacher's Approval*

## **Bible and Physical Education Departments**

These courses are required courses. Every student is enrolled in Bible/PE for their grade. They will switch courses half-way through each term.

### **Physical Education Department**

*The PE program is designed to enhance the physical well-being of all students through the implementation of developmentally appropriate activities. Activities may change from what is listed. The fundamentals of fitness and conditioning and developing lifelong health habits are the main thrusts of all grades. Fitness assessments and activity involvement is surveyed each year so that progress can be measured for each of the years that a student attends RVA.*

- **PE 7th Grade:** Introduction of basic skills and rules in the following activities/sports: Cardio fitness/weight training: level 1, stunts and tumbling, rope jumping, rugby, soccer, racquetball and basketball.  
Health 7<sup>th</sup> Grade: Introduction to Nutrition.
- **PE 8th Grade:** Introduction of basic skills and rules in the following activities/sports: Cardio fitness/ weight training: level 2, flag football, field hockey, track and field, softball, volleyball, badminton  
Health 8<sup>th</sup> Grade: Nutrition: level 2
- **PE 9th Grade:** Weight training/cardio fitness: level 3, softball, track and field, racquetball, soccer, volleyball, and basketball.  
Health 9<sup>th</sup> Grade: Communicable and non-communicable diseases.
- **PE 10th Grade:** Weight training/cardio fitness: level 4, softball, field hockey, tennis: level 1, badminton, and flag football, and volleyball.  
Health 10<sup>th</sup> Grade: Drugs, Alcohol, and Smoking.
- **PE 11th Grade:** Cardio team sports, team building introduction to golf, tennis: level 2, racquetball, and various other activities.  
Health 11<sup>th</sup> Grade: First Aid/CPR
- **PE 12th Grade:** Cardio fitness activities, Fitness Programming and Assessment (weight room/cardio), lifetime activities, team building, badminton, and various other activities.  
Health 12th Grade: Third Culture Kid Experience (TCK) in preparation for transition seminar.

## **Bible Department**

**7th Grade** – Old Testament Survey 1 (Genesis through Ruth)

**8th Grade** – Old Testament Survey 2 (Samuel through Malachi)

**9th Grade** – New Testament Survey 1 (Life of Christ)

**10th Grade** – New Testament Survey 2 (Acts through Revelation)

**11th Grade** – Doctrine, Cults

**12th Grade** – Worldviews, Ethics, and Apologetics

### **Term Length Course:**

- **Religious Studies (Islam)** - One of the fastest growing religions today, Islam is having a powerful impact on the world around us. During this term-length elective, 11th and 12th grade students will study Islam in depth and will learn about: core beliefs and writings, worship, prayer, Muhammad, festivals and pilgrimage, growth of Islam, and how those living in Islam follow its teachings in their everyday lives. This elective is recommended for all RVA students, but will especially prepare students who are planning to take the Religious Studies IGCSE exam. IGCSE students must take this course in the third term of their 11th grade year, and will take the IGCSE exam.

## **Studying in the UK after RVA**

Since the mid 1980s, RVA has tried to offer an alternative curriculum for British MKs and others wishing to continue their studies in the UK or Europe after graduation. There are two routes to further education in the UK after leaving RVA: the AP route (Advanced Placement) and the IGCSE route.

### **Advanced Placements (APs)**

In 2008, UCAS (Universities and Colleges Admissions Service) officially accepted APs as a valid qualification in its own right for entry to British universities. They awarded APs approximately the same number of points as A-levels, and recognised APs as being equivalent to A-levels. See the UCAS website for more details:

<https://wwwucas.com/ucas/undergraduate/getting-started/entry-requirements/tariff/tariff-tables/966>.

It is important to note that UCAS has divided AP subjects into two groups, with Group A subjects receiving significantly more points than Group B subjects. The link above shows a list of the two subject groups.

Three APs at grade 4 or 5 open up doors for further study in the UK at Russell Group universities. For instance, recent RVA graduates have successfully gained admission to St. Andrews and The University of Bristol. Students applying to university on the strength of AP scores do not need any IGCSEs. However, British universities often require good SAT and/or ACT scores in addition to APs. Students at RVA are able to take SAT and ACT tests.

One or two APs at grade 3 or above will allow entry to some non-Russell Group universities, for a degree course or a foundation course. For example, recent RVA students have had offers from universities such as Aberystwyth, Winchester and Manchester Metropolitan. These students did not take IGCSEs.

RVA recognises that not all students are able to succeed at the AP level, and is committed to helping non-AP students who want to continue their studies in the UK. For non-AP students, RVA offers an IGCSE programme. Students gaining 5 IGCSEs at Grade C or above will have the option to study on vocational Diploma courses in the UK.



## **IGCSEs**

We are pleased to announce that in 2014, RVA was officially approved by Cambridge International Examinations (CIE) as a Cambridge Associate School. This means that students can take their IGCSE exams at RVA, have coursework options, and can take their exams at different times of year. RVA staff teaching IGCSEs will have access to a wide range of resources, including training.

The IGCSE (International General Certificate of Secondary Education) programme at RVA is open to all RVA students in Grades 10, 11 and 12. It is not mandatory to take the official IGCSE exam in order to receive an RVA credit for the course. IGCSE courses are therefore a viable option for any RVA students in Grades 10 to 12.

Beginning in 2015-2016, RVA now offers the following IGCSE subjects:

- Biology
- English First Language
- French Second Language
- Information and Communication Technology
- Mathematics
- Religious Studies (Islam)

IGCSE students will take mainstream classes where possible, so that they can study with their peer group. For most of the subjects, an additional term length course is necessary, to cover any topics specific to the IGCSE exam, and to practise past papers. The term length courses are detailed below.

For the French IGCSE, students need to have a level of French equivalent to RVA's French 3 course. There is no additional term length course for French, as the French 3 curriculum aligns well with the IGCSE curriculum.

## **IGCSE Term Length Course Descriptions**

### **Biology**

This term length course follows on from Biology 10, and is available in first term only. It covers the following topics: characteristics and classification of living organisms; organisation and maintenance of the organism; development of the organism and the continuity of life; relationships of organisms with one another and with their environment. This course meets the requirements for the IGCSE in Biology, and prepares students for the IGCSE exam taken at the end of October. It is open to non-IGCSE students, however, who may have an interest in these topics. IGCSE students must take this course in their 11th grade year.

### **English Language**

This term length course is a continuation of English 10, and is available in second term only. The course develops the following skills: understanding texts; understanding how writers achieve effects; summarising; argumentative writing; and descriptive/narrative writing. This course meets the requirements for the IGCSE exam taken in May. It is open to non-IGCSE students, however, who may be interested in developing these skills. IGCSE students must take this course in their 11th grade year.

### **Information and Communication Technology (ICT)**

This term length course is a continuation of Computer 9, and is available in first term only. It covers the following topics: types and components of computer systems; input and output devices; storage devices and media; computer networks; data types; the effects of using ICT; the ways in which ICT is used;

systems analysis and design. This course meets the requirements for the IGCSE in ICT, and prepares students for the IGCSE exam taken at the end of October. It is open to non-IGCSE students, however, who may have an interest in these topics. IGCSE students must take this course in their 10th grade year.

## Mathematics

This term length course follows on from Algebra 2, and is available in second term only. The course covers the following topics: numbers; algebra and graphs; geometry; mensuration; co-ordinate geometry; trigonometry; matrices and transformations; probability; and statistics. This course meets the requirements for the IGCSE in Mathematics, and prepares students for the IGCSE exam taken in May. It is open to non-IGCSE students, however, who may be interested in revising these topics.

## Religious Studies (Islam)

One of the fastest growing religions today, Islam is having a powerful impact on the world around us. During this term-length elective, 11th and 12th grade students will study Islam in depth and will learn about: core beliefs and writings, worship, prayer, Muhammad, festivals and pilgrimage, growth of Islam, and how those living in Islam follow its teachings in their everyday lives. This elective is recommended for all RVA students, but will especially prepare students who are planning to take the Religious Studies IGCSE exam. IGCSE students must take this course in the third term of their 11th grade year, and will take the IGCSE exam

## Term Length Courses

Each year RVA offers a number of one-term electives, (often exploratory courses) in a wide variety of subjects. Please note the following when considering one or more of these courses:

These courses will depend upon student interest and available staff. There is NEVER any guarantee that these courses will be offered.

Term length courses will be offered during the same period each day (usually 3rd period) and while most students get to choose three term-length courses for that period, sometimes there is a conflict because two choices are both offered during the same term.

Seniors will be given preference for term length courses during pre-registration. A student who signs up for three term length courses will be given preference over students who only sign up for one or two term-length courses. Students who wish to take only one or two term length courses may do so ONLY in place of their study hall.

Some term length courses count as academic credit for English, Social Studies, and Fine Arts. See clarification below. Successful completion of a term length course will be entered on the official transcript as 1/3 credit and be used for calculating total credits for graduation, GPA, and honor roll. Grading procedures for term length courses are the same as all other RVA courses.

*The following term lengths can count toward graduation requirements in these areas:*

- English: Film as Literature, Lewis and Tolkien, Speech and Debate, Creative Writing, and Journalism.
- Social Studies: African Cultures, Psychology, and Model United Nations.
- Fine Arts: Fundamentals of Music Theory, Photography, Photography II, Pottery I, Art 9, Art Survey, Adv. Art I, Adv. Art II, Choir, Wind Ensemble, Advanced Band, AP Music Theory, Wood Tech I, Wood Tech II, Wood Tech III, Wood Tech IV, Yearbook, Videography, and Graphics and Design. In addition, recognition by the drama department may count toward the fine arts requirement.
- Science: AP Chemistry, AP Biology, Tropical Third World Medicine
- Mathematics: Trigonometry