



# Randolph-Macon Academy

## 2016-17 Graduation/Diploma

### Requirements & Course List

Mr. Jonathan Ezell, Academic Dean

[academics@rma.edu](mailto:academics@rma.edu)

- Students have 7 classes a day and must meet the graduation and credit requirements.
- AP and Honors Courses must be approved by the Department Chair. If a student is not already approved they may email their current teacher to seek approval.
- Please note when a course has a prerequisite or co-requisite, be sure you have met those requirements before selecting.
- Dual-enrolled courses are designated and will require an additional fee if the student wishes to receive college credit.
- All students must have at least one Fine Art elective credit to graduate

#### DIPLOMA TYPES AND GRADUATION CREDIT REQUIREMENTS

Advanced Diploma	College Preparatory
4 Language Arts Courses (English/ESL)	4 Language Arts Courses (English/ESL)
4 Required Social Studies Courses: World History II, Bible, United States History, & United States Government	4 Required Social Studies Courses: World History II, Bible, United States History, & United States Government
4.5 Mathematics Courses (.5 Credit for Computer Literacy test out)	3.5 Mathematics Courses (.5 Credit for Computer Literacy test out)
4 Science Courses	3 Science Courses
3 Years of One Foreign Language	2 Years of One Foreign Language
2 Credits of Physical Education	2 Credits of Physical Education
4.5 Electives (1 Elective Credit must be a Fine Art Elective)	4.5 Electives (1 Elective Credit must be a Fine Art Elective)
Aerospace each year in attendance	Aerospace each year in attendance
<b>27 Credits minimum</b>	<b>24 Credits minimum</b>

## English

**Department Chair: Mr. Robert Davies, [rdavies@rma.edu](mailto:rdavies@rma.edu)**

**4 total credits required for Advanced Diploma and College Preparatory Diploma**

**(Double English classes in 9th and 10th grade count for 1 English credit and 1 elective credit each year)**

- English 9
  - 2 periods: 1 section Composition and 1 section Literature
- Honors English 9
  - 2 periods: 1 section Composition and 1 section Literature
- English 10
  - 2 periods: 1 section Composition and 1 section Literature
- Honors English 10
  - 2 periods: 1 section Composition and 1 section Literature
- English 11: American Literature
- AP English 11: English Language & Composition
- English 12: British Literature
- Honors English 12: Utopia/Dystopia
- AP English 12: English Literature & Composition
  - Dual-enrolled through Shenandoah University*
- English as a Second Language III/ESL 3
  - Double Block
  - Requires 720-780 TOEFL Jr. score/64 TOEFL score
- Mainstream English (MS)
  - The course between ESL and Regular English
  - Double Block
  - Requires 780+ TOEFL Jr. score/74 TOEFL score

### English Electives

- The Honors Arts in Society

## Social Studies

**Department Chair: Mr. Brian Barbour, [bbarbour@rma.edu](mailto:bbarbour@rma.edu)**

**4 total credits required for Advanced Diploma and College Preparatory Diploma**

- World History II: 9th grade
  - Honors class available based on recommendation*
- Bible: 10th grade
- US History: 11th grade
- AP US History: 11th grade
  - Dual-Enrolled through Shenandoah University*
- US Government: 12th grade

- AP US Government: 12th grade

### **Social Studies Electives**

- AP European History  
*Dual-Enrolled through Shenandoah University*
- 20<sup>th</sup> Century Warfare (one semester course)
- AP Psychology  
*Dual-Enrolled through Shenandoah University*
- Sociology/Criminology
- AP Art History

## **Mathematics**

**Department Chair: Mr. Eric Barr, ebarr@rma.edu**

**4 total credits required for Advanced Diploma and 3 total credits required for College Preparatory Diploma plus all students must have at least .50 credit in a computer class to equal 4.5 and 3.5.**

- Algebra I: Regular & Honors
- Geometry: Regular & Honors
- Algebra II/Trigonometry: Regular & Honors
- Transition to College Mathematics and Statistics
- Pre-Calculus
- Honors Pre-Calculus  
*Dual-enrolled through Shenandoah University*
- AP Statistics
- AP Calculus AB (Calculus I)  
*Dual-enrolled through Shenandoah University*

## **Science**

**Department Chair: Mrs. Kara Lewallen, klewallen@rma.edu**

**4 total credits required for Advanced Diploma and 3 total credits required for College Preparatory Diploma**

- Biology
- AP Biology
  - Prerequisites: General Biology with an A or B and General Chemistry with an A or B
  - *Dual-enrolled through Shenandoah University*
- Chemistry  
Corequisite: Algebra II/Trigonometry
- AP Chemistry

- Prerequisites: General Chemistry with a grade of A or B and Algebra 2 with a grade of A or B
- *Dual-enrolled through Lord Fairfax Community College*
- AP Environmental Science
  - Prerequisites: General Biology with an A or B and General Chemistry with an A or B
  - *Dual-enrolled through Lord Fairfax Community College*
  - The goal of the AP Environmental Science course is 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 or preventing them.
  - Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. Yet there are several major unifying constructs, or themes, that cut across the many topics included in the study of environmental science.
  - The foundation of this course is based upon six themes:
    1. *Science is a process.* It is a method of learning more about the world, and it constantly changes the way we understand the world.
    2. *Energy conversions underlie all ecological processes.* Energy cannot be created; it must come from somewhere. As energy flows through systems, at each step more of it becomes unusable.
    3. *The Earth itself is one interconnected system.* *Natural* systems change over time and space. Biogeochemical systems vary in ability to recover from disturbances.
    4. *Humans alter natural systems.* Humans have had an impact on the environment for millions of years. Technology and population growth have enabled humans to increase both the rate and scale of their impact on the environment.
    5. *Environmental problems have a cultural and social context.* Understanding the role of cultural, social, and economic factors is vital to the development of solutions.
    6. *Human survival depends on developing practices that will achieve sustainable systems.* A suitable combination of conservation and development is required. Management of common resources is essential.
- Physics
  - Prerequisites: Algebra 1 and Algebra 2
- AP Physics
  - Prerequisites: General Physics with a grade of A or B, Algebra 2 with a grade of A or B, and AP Calculus with a grade of A, B, or C, or currently enrolled in AP Calculus
- Anatomy & Physiology
  - Integrates anatomy and physiology of cells, tissues, organs and systems of the human body. Integrates concepts of chemistry, physics and pathology
  - *Dual enrolled through Shenandoah University as Biology 231*
- Geospatial Information Systems (GIS)
  - Full-year course

- Prerequisite: Algebra II
- *Dual enrolled through James Madison University*
- This course teaches the basics of Geospatial Information Systems (GIS), which is a computer-based processing of data, both spatial and geographical, for the purpose of understanding concepts, presenting information, and recommending action on a specific topic of interest. Processing includes capturing, storing, manipulating, analyzing, managing, and displaying information that effectively crosses academic boundaries. GIS skills are inherently transferable, utilized in an increasingly broad array of fields and professions in industry. Individual interests are encouraged as the selection of your GIS projects and are typically associated with current events, personal interest, and school or community focus. Project presentations allow students to build communication skills and introduce mixed topics of interests to all classmates.
- Introduction to Plant Science and Technology
  - A tremendous portion of this course revolves around our school garden. This immersive course, with the text and garden as our foundation, is designed to help students understand the crop-based sources of their food and fiber, how the food production system works, and how we are each impacted by the interconnectedness of food and a variety of agricultural systems. Students also learn about the nutritional value of our foods through food chemistry studies and the history of our consumption patterns. Sustainability is a major underlying theme as we study how the food we eat gets on our plates and how these topics relate to our everyday lives.
  - *Dual-enrolled through Lord Fairfax Community College*

## **Foreign Language**

***Department Chair: Mr. Stephen Latham, slatham@rma.edu***

**3 total credits required for Advanced Diploma and 2 total credits required for College Preparatory Diploma**

- French 1, 2, 3 (Honors), 4 (AP), 5 (AP)  
*4 & 5 are dual-enrolled through Lord Fairfax Community College*
- German 1, 2, 3 (Honors), 4 (AP), 5 (AP)
- Spanish 1, 2, 3 (Honors), 4 (AP), 5 (AP)

## **JROTC Aerospace Classes**

***Department Chair: Col John Quattrone, USAF, Retired, jquattrone@rma.edu***

**Required course for each year at R-MA. Beginning with the class of 2019 and all new students: Students will be placed in Aerospace class based on the numbers of years they have been at R-MA. The students in the class of 2017 & 2018 are grandfathered and will follow the current system.**

- Aerospace I (for first-year students)

- Aerospace II (for second-year students)
- Aerospace III (for third-year students)
- Aerospace IV (for fourth-year students)

## **Fine Arts Electives**

### **1 total credit required for Advanced Diploma and College Preparatory Diploma**

- Advanced Art
  - For students who have already had a regular art class
- Band
- Chorus
- Digital Piano
- Drama
- Handbell Choir
- Studio Art
- Yearbook
- AP Art History
- The Honors Arts in Society

## **Physical Education**

### **2 total credits required for Advanced Diploma and College Preparatory Diploma**

- Personal Fitness
  - Semester Course
- Health/Wellness
  - A student will receive .50 PE credit if he or she successfully completes the E2C program through the Air Force JROTC classes.
- Sports Credit
  - A student will receive a .50 PE credit for each varsity sport in which they earn a varsity letter.

## **Additional Elective**

- Ground School
  - For flight students only.
  - 11th & 12th graders have first priority.