The Science and Mathematics Academy is a school-within-a-school magnet program serving students residing in Harford County.

Participation in this rigorous, four-year program is by competitive application and is based on:

- prior academic success
- interest and motivation in science and mathematics
- teacher recommendations
- written communication skills
- Mathematics and Science assessment results

Students apply for admission during the fall of their eighth-grade year and are notified of their final admission status in March.

To learn more about the program or the application process, please contact:

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Program Specialist, Science and Mathematics Academy at Aberdeen High School  
sarah.ashley@hcps.org  
251 Paradise Road  
Aberdeen, MD 21001  
410-273-5500

Mr. Michael Quigg  
Principal, Aberdeen High School  
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Aberdeen, MD 21001  
410-273-5500

Mr. Robert Limpert  
Supervisor of Business, Technology, and Magnet Programs, Harford County Public Schools  
102 S. Hickory Avenue  
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@SMA_STEM

Visit us on the web at  
www.scienceandmathacademy.com

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www.hcps.org
The Science and Mathematics Academy (SMA) offers young scholars challenging coursework which integrates science, technology, engineering, and mathematics and emphasizes research and real-world application. SMA students take a majority of their courses at the honors level with other members of the SMA. Students are able to take a variety of Advanced Placement courses in science and mathematics, as well as a large selection of elective courses.

Exclusive to the SMA is a four-year, sequenced series of courses called Science, Research, and Technology (SRT I-IV). SRT allows each student to discover and pursue their unique area of interest. Using the tools, techniques, and valid protocol inherent in scientific research, students develop critical thinking and creative problem solving skills. Regular contact with practicing scientists, engineers, and mathematicians is provided throughout the program. SRT culminates in a year-long capstone project under the mentorship of a professional scientist, mathematician, or engineer. The capstone project concludes with a detailed, scientific poster and a presentation to peers, faculty, parents, and mentors.

In order to complete the program and receive certification as a graduate of the SMA, the following requirements must be successfully met:

- **At least** one Advanced Placement SMA Mathematics class in addition to AP Statistics
- **At least** one Advanced Placement SMA Science class in addition to AP Environmental Science and AP Physics: Mechanics
- 4 SMA semester electives (2 credits)
- Science, Research, and Technology (SRT) I – IV. In addition, SRT IV must be completed during the student’s senior year which runs from August through May (school year).

**Four Year Course of Study**

### 9th Grade Class Schedule

- Honors Advanced Algebra ...............1.0
- AP Environmental Science ............1.0
- Honors Biology ..........................1.0
- Science, Research, and Technology 1 ...0.5
- Health ..................................0.5
- Honors English 9 .........................1.0
- Honors Government 9 ..................1.0
- Band/Chorus/Orchestra or Fine Arts ...1.0
- Foreign Language ....................1.0

Total Annual Credits .....................8.0

### 10th Grade Schedule

- Functions, Statistics & Trigonometry ....1.0
- AP Statistics ............................1.0
- Honors Chemistry .......................1.0
- Science, Research, and Technology 2 ...1.0
- Honors English 10 .......................1.0
- World History or AP World History ......1.0
- Physical Education or Fine Arts ........1.0
- Foreign Language ....................1.0

Total Annual Credits .....................8.0

### 11th Grade Class Schedule

- AP Calculus AB ...........................1.0
- AP Physics: Mechanics ..................1.0
- Science, Research, and Technology 3 ...1.0
- English 11 or AP English 11 ..........1.0
- U.S. or AP U.S. History .................1.0
- Foreign Language .....................1.0
- Electives of Choice (AP Math, AP Science or SMA electives) ................2.0

Total Annual Credits .....................8.0

### 12th Grade Schedule

- AP Science or AP Mathematics ..........1.0
- Science, Research, and Technology 4 ...2.0
- (Year-long Senior Capstone Project)
- English 12 or AP English 12 ..........1.0
- Electives of Choice ....................4.0

Total Annual Credits .....................8.0

Total Cumulative Credits .................32.0

**SMA Semester Electives:**

- Biotechnology
- Pre-engineering
- Microcontrollers
- Materials Science
- Bacteriology
- Organic Chemistry
- Genetics
- Ecology
- CAD
- Robotics
- Linear Algebra
- Cryptology
- Mathematical Logic
- Astrophysics
- Technical Writing
- Design Engineering
- Biochemistry
- Kinesiology

Member of the National Consortium of Secondary STEM Schools