

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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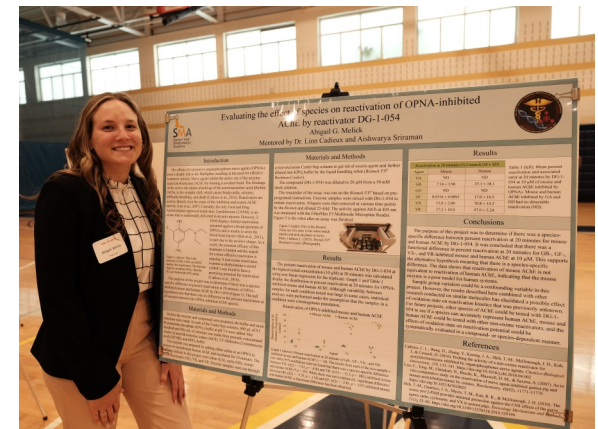
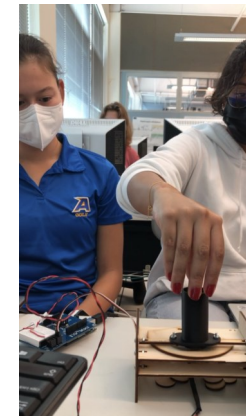
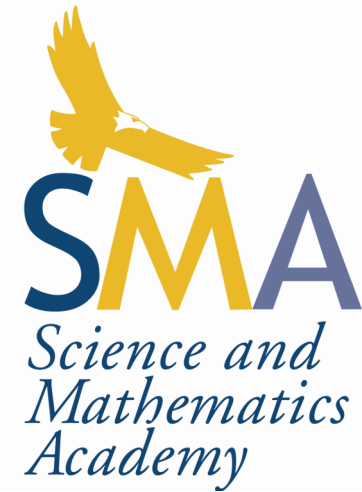
 @SMA_STEM

Visit us on the web at
www.scienceandmathacademy.com



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www.hcps.org



**Advancing Education.
 Enhancing Futures.**

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 SMA AP Statistics
- **At least** one Advanced Placement SMA Science class in addition to SMA AP Environmental Science and SMA AP Physics: Mechanics
- 3 SMA **semester** electives (1.5 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

SMA Honors Advanced Algebra	1.0
SMA AP Environmental Science.....	1.0
SMA 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

SMA Functions, Statistics & Trigonometry	1.0
SMA AP Statistics	1.0
SMA 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

SMA Semester Electives:

Biotechnology	Robotics
Pre-engineering	Linear Algebra
Microcontrollers	Cryptology
Algorithm Development	Mathematical Logic
Organic Chemistry	Astrophysics
Research Methods in STEM	Statistics using R
Ecology	Design Engineering
	Biochemistry
	Kinesiology

11th Grade Class Schedule

SMA AP Calculus AB	1.0
SMA AP Physics: Mechanics	1.0
Science, Research, and Technology 3	1.0
SMA Semester Electives	1.0
English 11 or AP English 11	1.0
U.S. or AP U.S. History.....	1.0
Electives of Choice (AP Math, AP Science, Foreign Language, Music/Art, etc.).....	2.0
Total Annual Credits.....	8.0

12th Grade Schedule

SMA AP Science or Mathematics	1.0
Science, Research, and Technology 4	2.0
(Year-long Senior Capstone Project)	
SMA Semester Electives	1.0
English 12 or AP English 12	1.0
Electives of Choice.....	3.0
Total Annual Credits.....	8.0

Total Cumulative Credits32.0



Member of the National Consortium of Secondary STEM Schools