



WHOLE SCHOOL Magnet High School

Montgomery County Public Schools, Rockville, Maryland

For Grades 9 through 12

Poolsville High School

17501 West Willard Road
Poolesville, MD 20837
240-740-2419

Global Ecology
Humanities
Independent Studies
Science, Mathematics,
Computer Science



Applications available at:
www.montgomeryschoolsmd.org/curriculum/specialprograms

Welcome to Poolesville High School

Introducing the Whole School Magnet

Montgomery County Public Schools has a twenty-five year track record of developing nationally recognized, rigorous instructional programs for highly motivated and capable students. Poolesville High School was recognized in the Washington Post Challenge Index as the #1 high school in the State of Maryland for the last seven years. The programs at Poolesville High school are available for up-county students who test into the program as well as for students who reside in the Poolesville attendance area. The whole school magnet opens to all the promise of rigorous, engaging courses taught by inspired teachers. A whole school magnet is organized around instructional “houses” composed of small teams of teachers from multiple disciplines focused on a proven magnet course of studies. The whole school model engages and challenges students selected through an application process, as well as local school students interested in the magnet focus areas.

Magnet focus areas

- Global Ecology House (GEH)
- Humanities House (HH)
- Independent Studies Program (ISP)
- Science, Math, Computer Science House (SMCSH)

Four Houses of Instruction—You Decide

Students who are participating the application/screening process may only apply to the Global Ecology House, Humanities House and the Science, Math, Computer Science House. They may be invited to all three houses or any combination. These students must choose a single instructional house. Students who successfully complete the house courses designated with an asterisk (*) will earn a House Certificate of Achievement.

All other students benefit from an Independent Studies Program. During the 9th and 10th grade year students fulfill many graduation requirements much in the same way as college freshman and sophomores complete basic graduation requirements. When choosing courses for the junior year, students select a house focus to earn an ISP Certificate of Achievement based on the courses they select as juniors and seniors.

For more information please visit the MCPS special programs website:

www.montgomeryschoolsmd.org/curriculum/specialprograms

Or visit the Poolesville High School website:

www.montgomeryschoolsmd.org/schools/poolesvillehs/magnet/



GLOBAL ECOLOGY HOUSE

Science/Social Studies/Research/Field Studies

Global Ecology students have the opportunity to specialize in rigorous science and social studies curricula. Every student has the opportunity to—

- Study environmental issues through rigorous interdisciplinary science and social studies curriculum,
- Develop field, laboratory, and research skills in the sciences, and social sciences;
- Cultivate an awareness of environmental citizenship, and
- Complete an environmental senior project.

HUMANITIES HOUSE

English/Social Studies/Research

Humanities students have the opportunity to study media productions, cultural and political studies, the arts, and communication with a focus on independent scholarship. Every student has the opportunity to—

- Pursue rigorous humanities curricula with interdisciplinary connections,
- Develop and refine skills in research, critical thinking, and oral and written communication;
- Work with peers to develop multimedia products, and
- Complete an independent senior research project

INDEPENDENT STUDIES PROGRAM

Biological and Physical Science/Cultural and Political Studies/Music, Arts, Media Studies/Technology and Math Studies/Original Studies

Independent Studies Program students have the opportunity to specialize in their own focused plan of studies with a required field studies component and senior project presentation. Every Independent Studies Program student has the opportunity to—

- Pursue rigorous curricula with a career/college focus,
- Work with peers to solve investigations requiring research, problem-solving skills, and reflection;
- Explore a profession which intrigues and captivates, and
- Complete a rigorous engineering program known as Project Lead The Way (PLTW)

SCIENCE, MATHEMATICS, COMPUTER SCIENCE HOUSE

Advanced Science, Math, Computer Science/Research

Science, Mathematics, and Computer Science students have the opportunity to specialize in rigorous mathematics and science curricula focused on problem-solving skills and research. Every Science, Mathematics, and Computer Science student has the opportunity to—

- Pursue rigorous science, mathematics, and computer science curricula focused on the problem-solving requirements of engineering;
- Develop and deepen skills in problem-solving, analysis, and laboratory investigations;
- Work with peers to solve mathematical, science, and engineering problems, and
- Complete an independent science research project linked to the student's interest.

All MCPS course descriptions can be found in the MCPS High School Course Bulletin or online at mcpscourses.org.

GLOBAL ECOLOGY HOUSE

Students choose from a range of courses in the *Global Ecology House (GEH)*.

Courses noted with an asterisk (*) must be successfully completed to earn the *Global Certificate of Achievement*.

	9	10	11	12
ENGLISH	Honors English 9	Honors English 10	<ul style="list-style-type: none"> Honors English 11 AP English Language and Composition 	<ul style="list-style-type: none"> Honors English 12 AP English Literature
SOCIAL STUDIES	Global Honors US History*	Global AP National State and Local Government*	Global AP World History*	
SCIENCE	Global Honors Biology*	Global Honors Chemistry*	<ul style="list-style-type: none"> Global Honors Physics (H)* or AP Physics 1 & 2 	<ul style="list-style-type: none"> Global AP Environmental Science*
HOUSE FOCUS	Global AP Seminar	take AP Research AND a total of 4+ semesters of Global electives** OR complete an internship after 11th grade AND take Research Project B (1 semester) AND 3-5+ semesters of Global electives** OR complete Project Lead the Way (Intro, To Eng, Design, Principles of Engineering, Digital Electronics, Civil Eng, & Architecture, Eng, Design and Development = 5.0 credits)		
MATHEMATICS	<ul style="list-style-type: none"> Honors Geometry Honors Algebra 2 	<ul style="list-style-type: none"> Honors Precalculus Honors Algebra 2 	<ul style="list-style-type: none"> Honors Precalculus AP Calculus BC, AP Calculus AB AP Statistics Calculus with Applications 	<ul style="list-style-type: none"> Calculus with Applications AP Calculus AB AP Calculus BC, AP Statistics Multivariable Calculus
ELECTIVES	<ul style="list-style-type: none"> Physical Education World Language—Spanish, French Fine Arts Technology Education 	<ul style="list-style-type: none"> Physical Education/Health World Language—Spanish, French Fine Arts Technology Education 	<ul style="list-style-type: none"> Physical Education/Health World Language—Spanish, French Fine Arts Technology Education 	<ul style="list-style-type: none"> Physical Education/Health World Language—Spanish, French Fine Arts Technology Education

☛ Courses may be linked and scheduled sequentially.

* Course is required for the Global Certificate of Achievement

** AP Science and Social Studies courses and Marine Biology, Physiology, Optics, Organic Chemistry, Thermodynamics, Quantum Physics, Analytical Chemistry, Intro to Genetic Analysis, PLTW courses, Internship (max. 2 semester credits)

HUMANITIES HOUSE

Students can choose from a range of courses in the Humanities House (HH). Courses noted with an asterisk (*) must be successfully completed to earn the Humanities Certificate of Achievement.

	9	10	11	12
ENGLISH	Humanities Honors English 9*	Humanities Honors English 10*	Humanities AP English Language and Composition*	AP English Literature*
SOCIAL STUDIES	Humanities AP NSL Government*	Humanities AP US History*	Humanities AP World History*	
HOUSE FOCUS	Criticism in the Humanities A/B*	Humanities AP Seminar*	AP Art History*	AP Research*
SCIENCE	Honors Biology	Honors Chemistry	Students must complete a total of 4 semesters of Humanities electives** during their junior and/or senior years. • Honors Physics	
MATHEMATICS	• Honors Geometry • Honors Algebra 2	• Honors Precalculus • Honors Algebra 2	• AP Calculus BC, AP Calculus AB • AP Statistics • Calculus with Applications • Honors Precalculus	• Multivariable Calculus • AP Calculus BC, AP Calculus AB • AP Statistics • Calculus with Applications
ELECTIVES	• Physical Education • World Language—Spanish, French • Fine Arts • AP Computer Science Principles • Technology Education	• Physical Education/Health • World Language—Spanish, French • Fine Arts • Technology Education	• Physical Education/Health • World Language—Spanish, French • Fine Arts • Technology Education	• Physical Education/Health • World Language—Spanish, French • Fine Arts • Technology Education

• Courses may be linked and scheduled sequentially.

* Course is required for the Humanities Certificate of Achievement

** AP courses in Art, Music, Social Studies or World Languages and Debate, Journalism, Yearbook, Theater, Creative Writing, Film as Literature.

Marine Biology, Cellular Physiology, Optics, Organic Chemistry, Thermodynamics, Quantum Physics, Analytical Chemistry, Biochemistry, Intro. to Physical Chemistry, Intro to Genetic Analysis, PLTW courses, Research Design, Research Project A, Internship (max. 2 semester credits), Materials Science, Robotics, Linear Algebra, Discrete Math, Computer Graphics, Software Design, Networking, Writing Mobile Applications, Intro to Cyber Forensics/Security, Programming Languages

INDEPENDENT STUDIES PROGRAM CERTIFICATE REQUIREMENTS

Freshmen and sophomores will be encouraged to take honors or AP classes, if appropriate. They will have opportunities to explore college and career pathways and to seek learning experiences outside of the classroom by participating in educational field trips. By the end of sophomore year, when they meet with their counselors, students should decide on a focused plan of study in one of the ISP areas of focus, to be completed in the junior and senior years.

Area of Focus	Requirement* —4.0 credits from the following courses**
Biological and Physical Science (BAPS)	AP Chemistry, AP Physics, Environmental Science, AP Environmental Science, AP Biology, Anatomy and Physiology, Earth Science, Forensic Science, Cellular Physiology, Genetics, Marine Biology, Analytical Chemistry, Wildlife Biology, Organic Chemistry, Internship
Cultural and Political Studies (CAPS)	AP World History, AP Human Geography, AP Economics, AP Literature, AP Language & Composition, AP NSL Government, AP Comparative Government, Comparative Religion, AP Art History, AP Psychology, Psychology, Ancient and Medieval History, Sociology, Philosophy, Law, Debate, World Language (level 3 or above), Internship
Music/Arts/ Media Studies (MAMS)	Band, Orchestra, Chorus, Guitar, Jazz Ensemble, Journalism, Theater, TV Production, Photography, Ceramics, Painting, AP Art History, Studio Art, AP Studio Art, Creative Writing, Yearbook, Media Literacy, Debate, Literature as Film, Web Design, Internship
Project Lead The Way (PLTW)	Introduction to Engineering (IED), Principles of Engineering (POE), Digital Electronics (DE), Civil Engineering and Architecture (CEA), Engineering Design and Development (EDD)
Technology and Math Studies (TAMS)	Networking, Computer Graphics, AP Computer Science, Analysis of Algorithms, Materials Science, Statistics, AP Statistics, AP Calculus AB & BC, Multivariable Calculus, Robotics, AP Computer Science Principles, Internship
Original Studies	Discuss with counselor or magnet coordinator your career of choice to develop the 4.0 credits required †

* Not all courses will be offered every year. New courses may be added as well.

** Courses must be completed during junior and senior year.

† Includes programs offered at PHS and through MCPS, such as: Thomas Edison High School of Technology, Fire/EMT Academy, AP/Honors Course, Internships, or College/Career Research and Development

SCIENCE, MATH, COMPUTER SCIENCE HOUSE-EXTENDED DAY

SMCSH has two different program certificates. The more prestigious certificate is the “Certificate of Achievement with Research.”

The second option is a “Certificate of Achievement” which does not have a research component.

Students must successfully complete at least BC Calculus to obtain either of the SMCSH certificates.

	9	10	11	12
ENGLISH	Honors English 9	Honors English 10	<ul style="list-style-type: none"> AP Language and Composition Honors English 11 	AP English Literature
SOCIAL STUDIES	Honors US History	<ul style="list-style-type: none"> AP National State & Local Government Honors National State & Local Government 	<ul style="list-style-type: none"> AP World History Honors Modern World History 	
SCIENCE	<ul style="list-style-type: none"> Advanced Science 1—Physics* Advanced Science 2—Chemistry* 	<ul style="list-style-type: none"> Advanced Science 3—Earth Science* Advanced Science 4—Biology* 	Students must complete a total of 6 semesters of SMCS electives** during their junior and senior years.	
RESEARCH	<ul style="list-style-type: none"> Research and Experimentation for Problem Solving 1 A/B* 	SMCS Principles of Engineering*	<ul style="list-style-type: none"> Research Design* and Research Project A* 	Research Project B
COMPUTER SCIENCE	<ul style="list-style-type: none"> Fundamentals of Computer Science A/B* 	Algorithms and Data Structures A/B*		
MATHEMATICS	<ul style="list-style-type: none"> Magnet Geometry* Magnet Precalculus A/B* or Magnet Functions A/B* 	<ul style="list-style-type: none"> Magnet Precalculus A/B Magnet Precalculus C/D Analysis 1 A/B or AP Calculus BC 	<ul style="list-style-type: none"> Magnet Precalculus C/D Analysis 1 A/B or AP BC Calculus Vector Calculus A/B or Multivariable Calculus A/B Linear Algebra AP Statistics* or Applied Statistics*/Linear Algebra 	<ul style="list-style-type: none"> Analysis 1 A/B or AP Calculus BC Vector Calculus A/B or Multivariable Calculus A/B Linear Algebra Discrete Math
ELECTIVES	<ul style="list-style-type: none"> Physical Education World Language—Spanish, French Fine Arts 	<ul style="list-style-type: none"> Physical Education/Health World Language—Spanish, French Fine Arts 	<ul style="list-style-type: none"> Physical Education/Health World Language—Spanish, French Fine Arts 	<ul style="list-style-type: none"> Physical Education/Health World Language—Spanish, French Fine Arts Internship

☛ Courses may be linked and scheduled sequentially.

* Course is required for the SMCS Certificate of Achievement

** Research Project B, Cellular Physiology, Optics, Organic Chemistry, Thermodynamics, Quantum Physics, Analytical Chemistry, Biochemistry, Intro. to Physical Chemistry, Intro. to Genetic Analysis, Marine Biology, AP Chemistry, AP Biology, AP Physics B or C, Analysis of Algorithms, Computer Graphics, Software Design, Networking, Robotics, Materials Science, Writing Mobile Applications, Intro to Cyber Forensics/Security, Programming languages

MCPS NONDISCRIMINATION STATEMENT

Montgomery County Public Schools (MCPS) prohibits illegal discrimination based on race, ethnicity, color, ancestry, national origin, religion, immigration status, sex, gender, gender identity, gender expression, sexual orientation, family/parental status, marital status, age, physical or mental disability, poverty and socioeconomic status, language, or other legally or constitutionally protected attributes or affiliations. Discrimination undermines our community's long-standing efforts to create, foster, and promote equity, inclusion, and acceptance for all. Some examples of discrimination include acts of hate, violence, insensitivity, harassment, bullying, disrespect, or retaliation. For more information, please review Montgomery County Board of Education Policy ACA, *Nondiscrimination, Equity, and Cultural Proficiency*. This Policy affirms the Board's belief that each and every student matters, and in particular, that educational outcomes should never be predictable by any individual's actual or perceived personal characteristics. The Policy also recognizes that equity requires proactive steps to identify and redress implicit biases, practices that have an unjustified disparate impact, and structural and institutional barriers that impede equality of educational or employment opportunities.

For inquiries or complaints about discrimination against MCPS staff *	For inquiries or complaints about discrimination against MCPS students *
Office of Employee Engagement and Labor Relations Department of Compliance and Investigations 850 Hungerford Drive, Room 55 Rockville, MD 20850 240-740-2888 OC00-EmployeeEngagement@mcpsmd.org	Office of the Chief of Staff Student Welfare and Compliance 850 Hungerford Drive, Room 162 Rockville, MD 20850 240-740-3215 COS-StudentWelfare@mcpsmd.org

**Inquiries, complaints, or requests for accommodations for students with disabilities also may be directed to the supervisor of the Office of Special Education, Resolution and Compliance Unit, at 240-740-3230. Inquiries regarding accommodations or modifications for staff may be directed to the Office of Employee Engagement and Labor Relations, Department of Compliance and Investigations, at 240-740-2888. In addition, discrimination complaints may be filed with other agencies, such as: the U.S. Equal Employment Opportunity Commission, Baltimore Field Office, City Crescent Bldg., 10 S. Howard Street, Third Floor, Baltimore, MD 21201, 1-800-669-4000, 1-800-669-6820 (TTY); or U.S. Department of Education, Office for Civil Rights, Lyndon Baines Johnson Dept. of Education Bldg., 400 Maryland Avenue, SW, Washington, DC 20202-1100, 1-800-421-3481, 1-800-877-8339 (TDD), OCR@ed.gov, or www2.ed.gov/about/offices/list/ocr/complaintintro.html.*

This document is available, upon request, in languages other than English and in an alternate format under the *Americans with Disabilities Act*, by contacting the MCPS Office of Communications at 240-740-2837, 1-800-735-2258 (Maryland Relay), or PIO@mcpsmd.org. Individuals who need sign language interpretation or cued speech transliteration may contact the MCPS Office of Interpreting Services at 240-740-1800, 301-637-2958 (VP) or MCPSInterpretingServices@mcpsmd.org. MCPS also provides equal access to the Boy/Girl Scouts and other designated youth groups.

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Maryland's Largest School District

MONTGOMERY COUNTY PUBLIC SCHOOLS

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