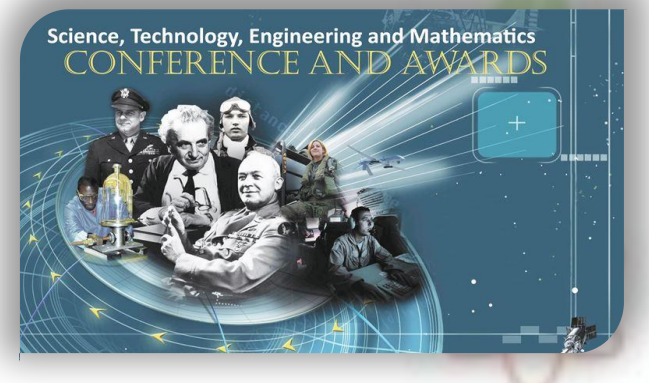
Parsippany -Troy Hills STEM Pathways

Mission Statement: To provide PTHSD high school students with the opportunity to concentrate their studies, beyond those required in high school, in the areas of science, technology, engineering, and mathematics, and expose students to relevant real world experiences through project work, conferences and presentations to enhance their high school experience.

Goals:

- Inspire keen interest in mathematics, science, engineering, and technology, develop strong scholarship in the subject and promote the enjoyment of these studies in high school.
- Expose students to potential career opportunities in the field.
- Encourage students to pursue higher education and major in STEM careers.
- Promote interactions with STEM professionals to learn about future opportunities.
- Support field experiences connected to the world outside of the school building.
- Signal to employers, universities, training programs, and military that a student has completed a comprehensive course of study in a specialized area.
- Cultivate transferable work habits such as perseverance, goal setting, and self-direction.



PATHWAY OPTIONS

REGULAR PATHWAY

- 4 credits of Math
- 4 credits of Science
- 4 credits of STEM-designated electives
- Maintain an overall 2.85 GPA
- Participate in a minimum of 3 STEM presentations/conferences each year with a required minimum total of 12 presentations/conferences throughout the 4 years. *
- Join and actively participate in a STEM-related extracurricular activity or club every year of attendance. -

DISTINCTION PATHWAY

- 4 credits of Math - At least one math course should be an AP Math class.
- 4 credits of Science- At least one science course should be an AP Science class.
- 4 credits of STEM-designated electives - One must be a Computer Science/Technology Class
- Maintain an overall 3.5 GPA
- Participate in a minimum of 3 STEM presentations/conferences a year with a required minimum total of 12 presentations/conferences throughout the 4 years.
- Join and actively participate in a STEM-related extracurricular activity or club every year of attendance.
- Either participate in an internship or design and implement a community impact project.

Elective Course Offerings

Science	Math	Computer Science/ Technology	Art	Applied Technology/ Family Consumer Science and Other
• AP Biology • AP Chemistry • AP Physics C • Forensics • Honors Anatomy and Physiology • AP Environmental Science • Marine Biology • Organic Chemistry • Genetics • Astronomy • Bioethics • MythBusting: The Science of Literature and Films	• ⁺AP Calculus • ⁺AP Statistics • ⁺Calculus • Probability, Statistics, and Discrete Math • ⁺Precalculus • Algebra 3 & Trigonometry • Applied Math • Honors Accounting 1 • Investments • AP Economics • Business Org. Management	• Computer Programming in C++ • Robotics • Computer Science and Programming Concepts with Python • AP Computer Science Principles • AP Computer Science A • Honors Data Structures and Advanced Programming • Networks (CCNA cert) • Switching, Routing, & Wireless Essentials (CCNA cert) • Cybersecurity (CCNA cert)	• Graphic Design • Digital Photography • Advanced Digital Photography *****AP Captsone - Seminar and Research w/ advisor approval**	• Nutrition for an Active Lifestyle • Engineering CAD and Design Foundations • Television Production I / II • Careers in Medicine (Phys Ed department) • Woods Tech 1 and 2 • Honors Engineering and Design

What Colleges Say!

When asked the question, **"Would participation in the STEM Pathways set PTHSD students apart when applying to your school?",** colleges responded with the following:

SUNY Binghamton: "Yes. We are a R1 research institution and students with a strong STEM curriculum that includes research or lab work are generally more competitive in our applicant pool and more success as students at Binghamton because of their early HS experience."

Towson University: "Participation in this program would show us that the student is challenging him/herself in their courses which is something we look at when reviewing applications."

Drew University: "Yes,it would show that they are challenging themselves in the classroom."

NJIT: "Yes- this would demonstrate to Admissions that a student is interested in STEM programs, and would be a strong candidate for our programs."

Ithaca College: "Yes, we look for students who participate in classes and activities that enhance their knowledge and skills in their area of interest."

Montclair University: "Rigorous math and science lab classes beyond standard curriculum could be looked at for scholarship eligibility along with high GPA."

For more information and our application please visit our website by clicking here.