BLOOMSBURG UNIVERSITY OF PENNSYLVANIA

Benton Area, Berwick Area, Bloomsburg Area, Central Columbia, Columbia County Christian, Danville Area, Lewisburg Area, Line Mountain, Meadowbrook Christian, Millville Area, Milton Area, Montgomery Area, Mt. Carmel Area, Southern Columbia School and Warrior Run Area Districts and Columbia-Montour Area Vocational-Technical School

STEM

Science, Technology, Engineering and Mathematics Magnet Program
Why consider the STEM (Science, Technology, Engineering and Mathematics) Field?

The STEM field is the new American frontier! It is anticipated that STEM occupations will grow 1.6 times faster than non-STEM occupations over the period from 2015-2025. In the same period, STEM employment is expected to grow 17% as compared to the projected 10% growth rate for overall employment. STEM occupations pay better, too. The top 10 bachelor degree majors with the highest median earnings are all in the STEM field. Yet while the STEM field offers excellent career opportunities, 60% of U.S. employers have difficulty finding qualified employees to fill their vacancies and many of these companies are located right here in Central Pennsylvania. This is why STEM Education has become a national priority.

There is more to considering a career in the STEM field than financial security. STEM occupations can offer a chance to make a difference in the world. It offers a chance to be creative and imaginative, to collaborate with others while solving real-world problems, to experiment and explore new possibilities. For the curious, it offers challenges and rewards unlike any other field. If you have seen this potential in your son or daughter, then the STEM field is in need of them.

What is the STEM Magnet Program at Bloomsburg University?

The STEM Magnet Program, founded in Fall 2013, allows high-achieving high school juniors and seniors the opportunity to get a head start on a college career in the STEM disciplines. The program offers a choice in five areas of focus: engineering, health sciences, technology, chemistry and environmental science. It also gives students interested in math or other sciences the tools needed to be successful in college.

College graduates with degrees in science, technology, engineering and mathematics are in great demand, but only 40% of students who enter college as a STEM major complete their degrees. The STEM Magnet program provides your son or daughter with a strong foundation toward completing a STEM degree. Through the program, your son or daughter can earn up to 30 college credits that will apply to a STEM major at the college of his or her choice while also meeting other students from the region who are interested in STEM. For example, a current STEM student who is the process of completing her senior year will be entering the college of her choice in Fall 2015 as a sophomore after having completed the STEM Magnet Program.

What will my son or daughter do in the STEM Magnet Program at Bloomsburg University?

While continuing to take classes at their current high school, your son or daughter will be a part of a cohort of students from 17 school districts who will take two college courses per semester at Bloomsburg University. Students are also given the option of taking a summer course at Bloomsburg University. A sample of potential courses that have been offered include:

- For the Engineering Cohort: Intro to Engineering, Engineering CAD Graphics, Engineering Circuits, Pre-Calculus, Calculus I or II, Physics I, Critical Thinking, or Python Programming.
- For the Health Sciences Cohort: Medical Ethics, Introduction to Statistics, Psychology, Chemistry 1, Intro to Forensics Science, Anatomy & Physiology, Psychology, Critical Thinking, Pre-Calculus, Calculus 1, or Calculus 2.
- For the Technology Cohort: Intro to Engineering, Engineering CAD Graphics, Python Programming, Digital Forensics, Java Programming, Intro to Statistics, Pre-Calculus, Essential of Calculus, Calculus 1, Calculus 2.
- For the Chemistry Cohort: Introductory Chemistry, Chemistry for Sciences 1, Chemistry for Sciences 2, Pre-Calculus, Calculus 1, Calculus 2, General Physics 1, General Physics 2, Differential Equations
- For the Environmental Science Cohort: Intro to Physical Geography, Environmental Issues Choices, Climate Change, Intro to Statistics, Physical Geology, Map Use/Analysis, Quantitative Methods in Earth Science, Soil Science, Groundwater Hydrology
What other opportunities and support are available during the STEM Magnet Program?

During the first semester, students in the STEM Magnet Program meet several times weekly to study and collaborate together. Instructors and tutors are also available during the week to offer assistance to master the material covered in the courses. Students are also exposed to study skills during the semester that will help them prepare for college level work.

In addition, students enrolled in the program will get exposure to the STEM field by meeting with local engineering, medical, and business professionals to discuss the opportunities available after earning a STEM degree. Presenters from the college and community are brought in during the semester to discuss the different opportunities available in the STEM fields. Students also have the opportunity to learn more about the STEM fields by participating in hands-on activities such as field trips, etc. Experts in the field will serve as mentors to each STEM student during participation in the program.

What is the cost to attend the STEM Magnet Program?

The cost is $700 to $950 per semester, plus books; however, scholarships are available to cover part or most of the cost. Applications for scholarships are available online at www.bloomu.edu/stem or by contacting Dr. Kimberly Bolig, director, STEM Education Center at kbolig@bloomu.edu.

How do we apply?

All students must meet the eligibility requirements and complete the online application available at www.bloomu.edu/stem. A STEM Magnet panel will review all applications, based upon an established rubric.

What are the minimum requirements to apply?

- Must be a current sophomore at one of the sponsoring school districts
- Must have taken Algebra I, Algebra II and Geometry
- Must have taken two years of a science
- Must have a positive recommendation from a high school science or math teacher
- Must have a minimum attendance record of 95 percent

What will be required if accepted into the STEM Magnet Program?

- A two-year commitment to the program
- A three-day (non-consecutive) commitment during first summer
- Enrollment in a minimum of four Bloomsburg University courses: two each semester with the option of one during the summer term
- Total willingness to learn and participate
- Compliance with Bloomsburg University policies
- Participation in activities throughout the year

What is the next step after applying?

All applications will be reviewed by regional leaders. Applicants will be notified of their acceptance status by email and receive acceptance forms to complete. Receipt of these forms will confirm their attendance in the STEM Magnet Program. Additional information about the program will be sent upon receipt of the acceptance form.


For more information, contact Dr. Kimberly Bolig, College of Education Director for Education Prep & Training Programs at 570-389-4608 or kbolig@bloomu.edu.