



ACCELERATED LEARNING FOR S.T.E.M. CAREERS

XLR8 STEM ACADEMY OVERVIEW

INNOVATIVE CURRICULUM

XLR8 STEM Academy students pursue an innovative PLTW (Project Lead The Way) curriculum which allows them to cultivate their special talents in engineering, mechatronics, and biomedical science. The PLTW classroom is an engaging and thought-provoking place, where students develop critical thinking skills through hands-on project-based learning, preparing them to take on real-world challenges. Students will have the opportunity to create, design and build things like robots and cars, applying what they are learning in math and science to the world's grand challenges.

FOR STUDENTS OF DIVERSE BACKGROUNDS

PLTW programs are designed to serve high school students of diverse backgrounds; from those already interested in STEM-related fields to those who are more inspired by the application of STEM than they are by traditional mathematics and science courses.

VIRGINIA STATE APPROVED

XLR8 STEM Academy is one of 16 established Governor's Career and Technical Education Academies across the state approved by the Virginia Board of Education and sponsored and evaluated by the Virginia Department of Education.

PLTW INNOVATION CLASSROOM

When the first XLR8 STEM Academy students arrive in the fall of 2013, they will be the first students in the Region 2000 area to take advantage of courses from Project Lead the Way (PLTW), the leading provider of rigorous and innovative STEM (science, technology, engineering and math) education curricular used in schools.

The PLTW curriculum has been designed to promote critical thinking, creativity, innovation and real-world problem solving skills for students. The hands-on, project-based program engages students on multiple levels, and provides them with a foundation and proved path to college and career readiness.

The Pathway to Engineering program will be implemented in the 2013-14 school year. The courses in this pathway explore the design process and links STEM principles to relevant problem-solving activities. The courses are designed to help prepare students to pursue a post-secondary education and careers in STEM related fields.

CURRENT COURSES

Pathway to Engineering Curriculum

JUNIOR YEAR

- Introduction to Engineering Design
- Principles of Engineering
- Applied Technical Math
- Applied Chemistry

SENIOR YEAR (Mechatronics Specialty)

- Computer Integrated Manufacturing
- Digital Electronics
- Internship
- Applied Physics
- Engineering Math

SENIOR YEAR (Biotechnical Specialty)

- Biotechnical Engineering
- Digital Electronics
- Internship
- Human Anatomy and Physiology
- Engineering Math

KEY PARTNERS



SCHOOL PARTNERS



BUSINESS PARTNERS



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