



Overview Of Programs

Rigorous Academics

- Honors/AP sciences
- Accelerated math
- required engineering courses
- Engineering/technology/science electives
- Keystone/Capstone Project

Science

- Biology (honors, AP)
- Physics (honors, AP)
- Group research—Keystone Project
- Chemistry (honors, AP)
- Environmental science (AP)
- Forensic science
- Genetics
- Individual research—Capstone Project

Math

- Algebra I, II
- Geometry
- Pre-calculus
- Trigonometry/analytical geometry
- Calculus (AP)
- Probability and statistics
- Statistics (AP)

Computer Science

- Basic computer programming I, II (Basic)
- Computer programming I, II (C++)
- AP computer science (Java)
- Emergent computers—Video Game Development
- Unix/Linux

Engineering

- Technology studies
- Engineering technology I, II, III
- Group research—Keystone Project
- Computer-aided design
- Advanced applications of technology— industrial automation and robotics
- Artificial Intelligence and Mobile robotics
- Individual research—Capstone Project

Engineering Content Areas

- Electrical systems
- Control systems
- Pneumatics
- Robotics
- CNC machines
- CAM (Computer Aided Manufacturing)
- Desktop publishing
- Graphic design
- CAD (Computer-aided drafting)
- Materials technology
- Thermodynamics
- Structural engineering
- Computer control
- Manual machine tools
- Internet marketing
- Video production
- Mechanisms

Extracurricular Activities

Ourextracurricular programs give students the opportunity to explore options that may not be offered in classes or are of particular interest to them.

5th Block

Meets M-Th 2:30 to 3:50. Used for Sports, Clubs, Extra Courses, or research (Not required). Also used for Safety Net/Academic Recovery Program. 5th block is required if GPA is below 2.0 OR Grade below C in any class

Competitions

- SECME Engineering Design Competition (Regional champions, National finalist)
- SECME Water Rocket Competition (National runner-up)
- BotBall Robotics Competition (Judges Choice, Florida Regional)
- West Point Bridge Design Competition
- U.S. Army Corps of Engineers Engineering Week Competition
- Jacksonville University Engineering Week Competition
- Dell-Winston Solar Car Challenge



Explore And Create





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Scientists EXPLORE The World That Is.
Engineers CREATE The World Of The Future.
Okay, we know that math, sciences, and engineering may not be for everybody. But to many students, they can be an absolute blast! And they can prepare you for exciting, rewarding futures in college, the workforce or the military. The Math, Science and Engineering Academy Magnet at Robert E. Lee High School is all about exploring the fascinating world of science and technology—and getting a head start on creating the world of the future.

In addition to core academic subjects like AP English, social studies and foreign languages, our magnet students take courses in AP biology, chemistry, physics, calculus, and C++ and AP Java programming. If this is the kind of stuff that gets you fired up, come join us!

Explore And Create At
Robert E. Lee.



ROBERT E. LEE SENIOR HIGH
MATH, SCIENCE, AND ENGINEERING ACADEMY MAGNET

Hard Science And Soft Skills.

Ours is a rigorous but rewarding program that teaches you the “hard science” of many disciplines in addition to the “soft skills” you’ll need to succeed—things like teamwork, communication and project design.

Students focus on a variety of engineering disciplines, including electrical systems, control systems, pneumatics, robotics, CNC and CAM, desktop publishing, thermodynamics, structural engineering and more. Students then apply what they have learned in a semester design project that uses each of the technology areas they have studied.

Projects may include smart-house security systems, personal hovercraft, a steam-powered catapult an automated hydroponics garden or many others. You’ll take your learning out of the classroom and into the real world of scientific application.

Keystone Projects.

Students in tenth grade embark on an exciting group Keystone Project. Many technology concepts will be integrated in this broadly based project. It serves as a stepping stone to the Capstone Project.

Capstone Projects.

In eleventh and twelfth grades, students choose one large-scale project and work on research, design and fabrication. Conceptualized in eleventh grade, the project is completed in the twelfth. Students benefit from mentorship by professionals in the field of their project and are judged by local business leaders. This real-world partnership often gives students the inside track on employment after college!

Don't Just Prepare For The Future—Create It!

At Robert E. Lee, we’re preparing students for the most fascinating, valuable and rewarding careers of the 21st century. It’s a thrilling ride. Why not join us?

