

Unique Courses

Mathematics:

- Magnet Advanced Algebra
- Magnet Geometry
- Magnet Precalculus I & II
- *Magnet Data Analysis
- *Magnet Mathematical Modeling
- *Magnet Multivariable Calculus
- *Magnet Differential Equations
- *Magnet Computer Architecture

Science:

- Magnet Chemistry
- *Magnet Molecular Biology
- *Magnet Physics
- *Magnet Human Anatomy
- *Magnet Human Physiology
- *Magnet Astronomy
- *Magnet Meteorology
- *Magnet Analytical Chemistry
- *Magnet Organic Chemistry
- *Magnet Microbiology
- *Magnet Biochemistry
- Magnet Physical Geology



Technology:

- Magnet Foundations of Technology
- Magnet Electrical Engineering
- Magnet Multimedia Communications
- Magnet Materials of Science

**Weighted Courses*

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For more information, please contact:

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Mathematics & Science Academy

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Ocean Lakes High School

885 Schumann Drive
Virginia Beach, VA 23454

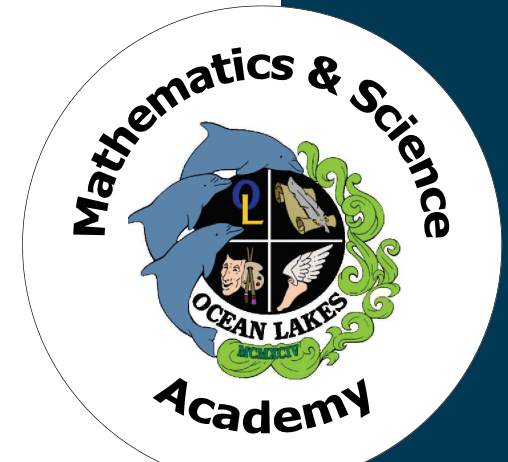
School Telephone Number: (757) 648-5550
School Fax Number: (757) 721-4309

James G. Merrill, Ed.D., Superintendent



The Virginia Beach City Public Schools prohibits discrimination on the basis of race, color, religion, sex, ethnicity, national origin, age, disability, pregnancy and childbirth, or marital status. School Board policies and supporting regulation (Policies 2-33, 4-4, 5-7, and 6-7 and Regulation 5-44.1) provide equal access to courses, programs, counseling services, physical education and athletics, vocational education, instructional materials, and extracurricular activities. Violations of these policies should be reported to the Director of Student Leadership at (757) 263-2020 or the Assistant Superintendent of Human Resources at (757) 263-1133.

Alternative formats of this publication which may include taped, Braille, or large print materials are available upon request for individuals with disabilities. Call or write The Department of Curriculum and Instruction, Director of Office of Academy Programs, Virginia Beach City Public Schools, 2512 George Mason Drive, P.O. Box 6038, Virginia Beach, VA 23456-0038. Telephone (757) 263-1405 or (757) 263-1461; fax (757) 263-1424.



PROGRAM INFORMATION

*Ocean Lakes
High School*

**Cheryl Askew,
Principal**

**Ann Zingraff-Newton,
Academy Coordinator**

Telephone: (757) 648-5550

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Program Description

In response to meeting the diverse interests and needs of high school students, Virginia Beach City Public Schools developed a rigorous and unique program of study emphasizing the core areas of mathematics and science with an infusion of technology. The Mathematics & Science Academy offers courses unavailable to other high school students designed to nurture their inquisitive minds and challenge their academic horizons.

Program Components

This advanced academic program was designed for academically motivated and dedicated students



who have a strong interest in mathematics and science. With this in mind, scientists, professors, community members, and educators created a challenging experience mirroring comparable competitive mathematics & science academy programs in the nation.

Senior Project

As a capstone experience of each Academy student's program of study, the mentorship/research project truly sets our students apart. The focus of the project is in a field of math, science, or technology and integrates the foundational topics studied in the preceding years. Students elect to complete a field-based research project or mentorship with a practicing scientist, mathematician, or a like professional. Successful completion of this portion of the program includes 140 hours of independent work, a multimedia presentation of the experience, a written summative thesis, and an oral presentation.



Program Requirements

Each Academy student will:

- ✓ Take at least one Academy math and one Academy science course each year,
- ✓ Complete a minimum of 5 units of high school math; entering freshmen are required to have completed Algebra I prior to 9th grade,
- ✓ Enroll in Honors or AP English courses each year of high school,
- ✓ Complete a minimum of 4 units of high school science, including magnet chemistry, magnet molecular biology, magnet physics, and senior science electives,
- ✓ Complete at least 3 years of one foreign language (students are encouraged to complete 4 years to be competitive applicants to selective colleges and universities),
- ✓ Complete 1 year of magnet technology courses,
- ✓ Complete a senior research or mentorship project,
- ✓ Take a minimum of six (6) classes each semester (The mentorship/research project will replace one semester class during the senior year.),
- ✓ Maintain a cumulative 3.0 GPA,
- ✓ Meet Virginia Advanced Studies diploma requirements.

Application Process

Rising 9th grade students, **enrolled in at least Algebra I**, may obtain an application packet at any Virginia Beach middle school, high school, or the school division Web site — vbschools.com. Completed packets, including parent, teacher, and counselor recommendation forms, student data sheet, Admissions Agreement, student transcripts, most recent report card, and standardized test scores must be forwarded to the Academy Coordinator at Ocean Lakes High School. Applicants will also be expected to take entrance tests and submit a writing sample.

A selection committee will review the applications of all qualified applicants and select the top candidates for admission into the program.

During the course of a student's tenure at Ocean Lakes High School, he/she will be able to experience a rich environment of accelerated instruction including:

- Extensive laboratory experiences using CBLs and other computer-based software and hardware,
- English curricula integrating a multitude of non-fiction materials and technical writing units,
- Emphasis on critical thinking skills in all academy courses,
- Intensive writing assignments designed to improve a student's skills and hone his/her ability to communicate effectively,
- Participation in various academic competitions,
- Exposure to a variety of technology applications including computers, software, scanners, digital cameras and other peripheral devices,
- Career counseling by guidance counselors and the academy coordinator to facilitate a student's preparation and acceptance into colleges and universities and for scholarships.