



VIRGINIA BEACH CITY PUBLIC SCHOOLS CHARTING THE COURSE

Department of Teaching & Learning Parent/Student Course Information

Physics (SC 4510) Online (SCO 510) One credit, one year Grades 10-12

Counselors are available to assist parents and students with course selections and career planning. Parents may arrange to meet with the counselor by calling the school's guidance department.

COURSE DESCRIPTION

Physics involves the study of properties and interactions of matter and energy. Problem-solving skills are stressed throughout the course as students investigate such topics as the historical development of physics, force and motion, work, heat, sound, light, electricity, magnetism and physics applications in everyday activities.

COURSE GOALS

- Develop a foundation of physics concepts for understanding the laws of physics and for understanding the interrelationships of physics with all other sciences
- Develop investigative skills in order to explain real-life situations
- Develop proficiency in two-step problem solving
- Develop a sense of responsibility and contribution to the group
- Focus on the role of physics in modern life and explore the application of physics concepts
- Apply the processes of rational thought to make responsible decisions about issues resulting from the interactions of science, technology and society

PREREQUISITE

Geometry

OPTIONS FOR NEXT COURSE

Advanced Placement Environmental Science (Biology and Chemistry prerequisite)
Advanced Placement Biology (Biology and Chemistry prerequisite)
Advanced Placement Chemistry (Chemistry prerequisite)
Advanced Placement Physics I (Algebra II/Trigonometry prerequisite)
Advanced Placement Physics C (Algebra II/Trigonometry and Calculus prerequisite)
Chemistry (Algebra II prerequisite or co-requisite)
Oceanography (Earth Science prerequisite)
Astronomy (Earth Science prerequisite)

REQUIRED TEXTBOOK

Essential Physics (3rd ed.), Hsu, Chaniotakis, Pahre (2018)

¹VBCPS Physics FlexBook

MINIMUM REQUIREMENTS

- Demonstrate knowledge and understanding of all core objectives via laboratory investigations, issue investigations and oral and written quizzes, tests and reports
- Participate in the core laboratory experiences and adhere to all safety procedure
- Prepare written reports for core laboratory experiences
- Investigate and report on career opportunities and areas of interest in physics
- Select, investigate and report on a topic in nuclear physics, quantum physics, fiber optics, superconductivity, robotics, continuous electron beam acceleration, etc.

¹The VBCPS Physics FlexBook is used as a supplemental resource.

Virginia Standards of Learning

Please follow the link below to view the standards for Physics on the Virginia Department of Education website.

[Physics](#)

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Produced by the Department of Teaching and Learning.
For further information, please call (757) 263-1070.

Notice of Non-Discrimination Policy

Virginia Beach City Public Schools does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation/gender identity, pregnancy, childbirth or related medical condition, disability, marital status, age, genetic information or veteran status in its programs, activities, employment, or enrollment, and provides equal access to the Boy Scouts and other designated youth groups. School Board policies and regulations (including, but not limited to, Policies 2-33, 4-4, 5-7, 5-19, 5-20, 5-44, 6-33, 6-7, 7-48, 7-49, 7-57 and Regulations 4-4.1, 4-4.2, 5-44.1, 7-11.1, 7-17.1 and 7-57.1) provide equal access to courses, programs, enrollment, counseling services, physical education and athletic, vocational education, instructional materials, extracurricular activities and employment.

Title IX Notice: Complaints or concerns regarding discrimination on the basis of sex or sexual harassment should be addressed to the Title IX Coordinator, at the VBCPS Office of Student Leadership, 641 Carriage Hill Road, Suite 200, Virginia Beach, 23452, (757) 263-2020, Mary.Dees@vbschools.com (student complaints) or the VBCPS Department of School Leadership, 2512 George Mason Drive, Municipal Center, Building 6, Virginia Beach, Virginia, 23456 (757) 263-1088, Elizabeth.Bryant@vbschools.com (employee complaints). Additional information regarding Virginia Beach City Public Schools' policies regarding discrimination on the basis of sex and sexual harassment, as well as the procedures for filing a formal complaint and related grievance processes, can be found in School Board Policy 5-44 and School Board Regulations 5-44.1 (students), School Board Policy 4-4 and School Board Regulation 4-4.3 (employees), and on the School Division's website at Diversity, Equity and Inclusion/Title IX. Concerns about the application of Section 504 of the Rehabilitation Act should be addressed to the Section 504 Coordinator/Executive Director of Student Support Services at (757) 263-1980, 2512 George Mason Drive, Virginia Beach, Virginia, 23456 or the Section 504 Coordinator at the student's school. For students who are eligible or suspected of being eligible for special education or related services under IDEA, please contact the Office of Programs for Exceptional Children at (757) 263-2400, Plaza Annex/Family and Community Engagement Center, 641 Carriage Hill Road, Suite 200, Virginia Beach, VA 23452.

The School Division is committed to providing educational environments that are free of discrimination, harassment, and bullying. Students, staff, parents/guardians who have concerns about discrimination, harassment, or bullying should contact the school administration at their school. Promptly reporting concerns will allow the school to take appropriate actions to investigate and resolve issues. School Board Policy 5-7 addresses non-discrimination and anti-harassment, Policy 5-44 addresses sexual harassment and discrimination based on sex or gender. Policy 5-36 and its supporting regulations address other forms of harassment.

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 Teaching and Learning, Virginia Beach City Public Schools, 2512 George Mason Drive, P.O. Box 6038, Virginia Beach, VA 23456-0038. Telephone 263-1070 (voice); fax 263-1424; 263-1240 (TDD) or email him at Keith.Goodman@vbschools.com.

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