



Department of Teaching & Learning
Parent/Student Course Information

COMPUTER PROGRAMMING
(MA 3172)
One credit, One year
Grades 9-12

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

This year-long course is designed to introduce students to the fundamentals of programming using a variety of tools. Although students may have had previous computer experience, no programming knowledge is assumed. Students will be introduced to problem-solving and programming concepts using *Alice*, a three-dimensional graphics-oriented programming environment. Through *Alice*, students will be introduced to the object-oriented computer programming paradigm used by many modern programming languages. The course includes the history of computing, hardware and software, problem solving, computer graphics, objects, functions, control structures, strings and arrays. Students will apply the concepts learned through *Alice* to the Java programming language using the NetBeans programming environment during the second semester of the course.

PREREQUISITE

Algebra I Honors or Algebra I

REQUIRED TEXTBOOKS

Alice 3 to Java: Learning Creative Programming through Storytelling and Gaming, First Edition, Dann, Cooper, Paoletti, and Culyba, Pearson (2018)

Virginia Standards of Learning

Computer Programming (Year) – MA3172

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

[Computer Programming](#)

Aaron C. Spence, Ed.D., Superintendent
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Produced by the Department of Teaching and Learning.
For further information, please call (757) 263-1070.

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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 George.Coker@vbschools.com.

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