



VIRGINIA BEACH CITY PUBLIC SCHOOLS
CHARTING THE COURSE

Department of Teaching & Learning
Parent/Student Course Information

Advanced Creative Coding & Computer Solutions
(BE 3217)
No Credit, One Semester
Grades 7 - 8

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 semester course is a culmination of topics covered in the previously completed Foundations of Creative Coding and Computer Solutions, and the Creative Coding and Computer Solutions II courses. Students will take a closer look at cloud computing, app design, privacy and encryption. This course concludes with the development of an independent project where students work to design, build, present, and market a game or app. Admission to this course is based upon the successful completion of the Foundations of Creative Coding and Computer Solutions course as well as the Creative Coding and Computer Solutions II course.

CERTIFICATION

None

STUDENT ORGANIZATION

The Future Business Leaders of America (FBLA) is the co-curricular organization for middle and secondary Business and Information Technology students. The organization enhances occupational preparation for students by helping them attain the following goals: leadership skills; knowledge of the American enterprise system; self-confidence; improvement of home, business, and community; scholarship; citizenship; and career goals.

PREREQUISITE

Foundations of Creative Coding and Computer Solutions and Creative Coding and Computer Solutions II

OPTIONS FOR NEXT COURSE

None

REQUIRED STUDENT TEXTBOOK

None

COMPETENCIES FOR ADVANCED CREATIVE CODING & COMPUTER SOLUTIONS

Demonstrating Workplace Readiness Skills: Demonstrating Personal Qualities and Abilities

- 1 Demonstrate creativity and innovation.
- 2 Demonstrate critical thinking and problem -solving.
- 3 Demonstrate initiative and self-direction.
- 4 Demonstrate integrity.
- 5 Demonstrate work ethic.

Demonstrating Workplace Readiness Skills: Demonstrating Interpersonal Skills

- 6 Demonstrate conflict-resolution skills.
- 7 Demonstrate listening and speaking skills.
- 8 Demonstrate respect for diversity.
- 9 Demonstrate customer service skills.
- 10 Collaborate with team members.

Demonstrating Workplace Readiness Skills: Demonstrating Professional Competencies

- 11 Demonstrate big-picture thinking.
- 12 Demonstrate career- and life-management skills.
- 13 Demonstrate continuous learning and adaptability.
- 14 Manage time and resources.
- 15 Demonstrate information-literacy skills.
- 16 Demonstrate an understanding of information security.
- 17 Maintain working knowledge of current information-technology (IT) systems.
- 18 Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.
- 19 Apply mathematical skills to job-specific tasks.
- 20 Demonstrate professionalism.
- 21 Demonstrate reading and writing skills.
- 22 Demonstrate workplace safety.

Addressing Elements of Student Life

- 23 Identify the purposes and goals of the student organization.
- 24 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.
- 25 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.
- 26 Identify Internet safety issues and procedures for complying with acceptable use standards.

Exploring Work-Based Learning

- 27 Identify the types of work-based learning (WBL) opportunities.
- 28 Reflect on lessons learned during the WBL experience.
- 29 Explore career opportunities related to the WBL experience.
- 30 Participate in a WBL experience, when appropriate.

Demonstrating Keyboarding Skills

- 31 Identify computer system components.
- 32 Boot, access, and exit operating system and software.
- 33 Key alphabetic, numeric, and symbol information, using a touch system and correct techniques.
- 34 Improve keyboarding techniques, speed, and accuracy.
- 35 Proofread copy.
- 36 Edit copy.

37 Describe ergonomic guidelines related to safe computer use.

Using Word Processing Software to Solve Problems

38 Key and format documents (e.g., letters, memoranda, reports, outlines, flyers, newsletters, and tables).

39 Compose documents (e.g., letters, memoranda, reports, outlines, and tables).

40 Apply word-processing skills to solve a problem.

41 Use word-processing program to develop notetaking skills.

Using Database Software to Solve Problems

42 Create a database by defining fields and designing formats.

43 Populate the database.

44 Process material using database features such as sort and merge.

45 Apply database skills to solve a problem.

Using Spreadsheet Software to Solve Problems

46 Input data and formulas.

47 Edit data within the spreadsheet (e.g., retrieve, update, move, and save).

48 Create graphs and charts to visually represent data.

49 Apply spreadsheet skills to solve a problem.

Using Telecommunications to Solve Problems

50 Identify emerging telecommunication technologies available to solve problems.

51 Identify local and worldwide network communication systems.

52 Use search strategies to retrieve electronic information.

53 Use electronic sources (e.g., encyclopedias, almanacs, indexes, and catalogs) to retrieve and select relevant information.

54 Analyze a problem to determine the telecommunication options needed for a solution.

55 Apply telecommunication skills to solve a problem.

Solving Ethical and Security Problems Relating to Computers

56 Identify security issues related to computer hardware, software, and data.

57 Analyze problems involving integrity, courtesy, and confidentiality related to information and communications systems.

58 Analyze the impact of regulations such as copyright and licensing agreements in computer software applications.

Solving Problems Relating to Computer Maintenance

59 Identify safety precautions associated with computer use.

60 Describe the care necessary for internal and external storage devices.

61 Describe methods of preventing the spread of computer viruses.

Local Competencies

62 Given a problem, identify individual actions that would fall within each step of the problem-solving process.

63 Iteratively improve a solution to a problem.

64 Apply the problem-solving process to approach a variety of problems.

65 Select the inputs and outputs used to perform common computing tasks.

66 Develop and iteratively improve an algorithm for processing information based on given constraints.

67 Design an app that inputs, outputs, stores, and processes information in order to solve a problem.

68 Write a simple HTML document that uses opening and closing tags to structure content.

- 69 Use heading tags to change the appearance of text on a web page.
- 70 Use the , , and tags to create ordered and unordered lists in an HTML page.
- 71 Identify the rights and restrictions granted by various Creative Commons licenses.
- 72 Add an image to a web page
- 73 Develop a set of techniques for preventing bugs in HTML code and finding them when they occur.

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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

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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.

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