All virtual courses include a state mandated virtual synchronous session at least once per marking period. These sessions will be scheduled and facilitated by the course instructor.

AP Exams
Exam fees are to be paid by the student or by the student's home district.
The individual school district **orders the exam** on behalf of the student and **administers the exam**.

COMPUTER SCIENCE

AP COMPUTER SCIENCE A (1 CREDIT)
GRADES: 11-12

The AP® Computer Science A course is equivalent to the first semester of a college level computer science course. The course involves developing the skills to write programs or part of programs to correctly solve specific problems. AP® Computer Science A also emphasizes the design issues that make programs understandable, adaptable, and when appropriate, reusable. At the same time, the development of useful computer programs and classes is used as a context for introducing other important concepts in computer science, including the development and analysis of algorithms, the development and use of fundamental data structures, and the study of standard algorithms and typical applications. In addition an understanding of the basic hardware and software components of computer systems and the responsible use of these systems are integral parts of the course.

Technology Requirements: Students must have access to a computer system that represents relatively recent technology (PIII). Students CANNOT use a Chromebook, iPad, or tablet for this course as JavaScript software must be downloaded onto a computer for this course. Schools need to have Java and Bluj software already installed on a designated machine(s) before the course starts and enough memory in their lab machines (128 MB) so that students will be able to compile and run Java and BluJ programs efficiently.

AP COMPUTER SCIENCE PRINCIPLES (1 CREDIT)
GRADES: 9-12

This AP Computer Science Principles (CSP) class uses the CompuScholar Computer Science Foundations[1] curriculum as the primary resource. It is taught as a one-year sequence and covers all required topics in the "Computer Science Principles" course description published by the College Board. The Python language is taught as the basis for programming topics. Students need to have typical computer usage skills prior to starting this course. Other introductory programming courses are not required, but are helpful. All required concepts are taught from the ground up in a fun, step-by-step manner. The course uses a variety of multimedia content such as full-color, interactive text, narrated instructional videos, and guided exercises. Strong emphasis is placed on hands-on programming labs to demonstrate mastery of lesson concepts.

Technology Requirements: No local software installation is needed. The Python activities can be completed from any web browser on any device including Chromebooks and tablets.
Course Requirement: Students are required to complete a **Performance Task** that consists of three components: program code, video, Personalized Project Reference containing screen captures of their list and procedure.

ARTIFICIAL INTELLIGENCE IN THE WORLD (.5 CREDIT)
GRADES: 9-12

Artificial Intelligence in the World is an introductory course that guides students through the concepts, tools, and building blocks of artificial intelligence. This course provides students with a broad overview of how AI is used in decision-making and problem-solving worldwide. Students will learn how ethics impacts AI and will also have the opportunity to explore the various parts of AI with hands-on activities through the use of chatbots and other exciting interactives.

FOUNDATIONS OF PROGRAMMING (.5 CREDIT)
GRADES: 9-12

Do you want to learn the skills required to be competitive in today's high tech workforce? Foundations of Programming (FoP) will teach students the fundamentals of programming using the computer language Python. The course provides students with the concepts, techniques, and processes associated with computer programming and software development. Students will also explore the many programming career opportunities available in this high-demand field.

Required Materials: A computer is required; tablets and Chromebooks can't be used for this course.

JAVASCRIPT (.5 CREDIT)
GRADES: 9-12

In this course, students will learn how to start programming with JavaScript. Students will learn the basics of JavaScript including testing, functions, objects, arrays, loops, conditional code, operators and syntax basics. Students will learn timing and animations, and how to debug. The class will conclude with a robust project that incorporates everything they learned in the semester.

Prerequisite: Students **MUST** take Web Design before taking this course.

PROGRAMMING WITH ALICE (.5 CREDIT)
GRADES: 9-12

Alice is an innovative 3D programming environment that makes it easy to create an animation for telling a story, playing an interactive game, or a video to share on the web. Alice is a free software tool designed to be your first exposure to object-oriented programming. It allows you to learn fundamental programming concepts in the context of creating animated movies and simple video games. In Alice, 3-D objects (e.g., people, animals, and vehicles) populate a virtual world and you create a program to animate the objects. Alice is developed and supported at Carnegie-Mellon University with financial support from Oracle, Electronic Arts, Sun Microsystems, DARPA, Intel, Microsoft, NSF and ONR. The director of the project is Wanda Dann.

PROGRAMMING WITH SCRATCH (.5 CREDIT)
GRADES: 9-12

Learn to program with the visual computer programming language Scratch. Scratch was developed at MIT's Lifelong Kindergarten Group. It allows users to explore basic programming concepts while creating multimedia programs, games and simulations. This course will help users to learn basic programming concepts and problem solving skills and take a deeper dive into more complex concepts including variables, loops, string processing and lists.

Requirement: Students under age 13 require parental/guardian permission and email address. A computer is required; tablets and Chromebooks can't be used. Students must be able to download files to be used with the web-based programming in Scratch.

WEB DESIGN (.5 CREDIT)
GRADES: 9-12

In this course, students will learn how to design a beautiful and functional website. Students will learn how to take their design and translate it into a live website using Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS) programming languages. HTML5 and CSS3 will be the standard versions used in the class. Students will understand design components of websites, including the use of color, layout and when to use different techniques, typography rules, and the importance of imagery. At the conclusion of the course, students will present a website to the class. Upon completion of this course, each student will have hands-on experience creating a fully functioning website.

Requirements: Students will be required to create a free account with Neocities.org and use it throughout this course.