

GENERAL INFORMATION

- All eighth grade students in Hunterdon County are eligible to apply. Out of county students will be considered based on availability of seats.
- Individuals interested in CSAEA are highly encouraged to apply, no prior computer science experience necessary.
- Acceptance into the program will be based on placement test scores, attendance, discipline records, 7th & 8th grade transcripts, and an interview.
- Students will be bused from their home to Voorhees High School (VHS), where the program is held. Students should coordinate transportation services through their school.
- The Academy program is designed for students to attend VHS the entire day and for all four years of high school.
- Each CSAEA class is equivalent to one 55 minute class within a rolling block schedule
- There are no fees for this program. The start up costs have been covered by grant funds and tuition is charged to the home school.
- After completing all the courses and academics necessary for graduation, students will graduate from the Computer Science and Applied Engineering Academy.
- CSAEA is not a substitute for the NJ State math and science graduation requirements.
- Students will be eligible to earn AP credit, as well as college credits. Colleges may require a discounted tuition fee.

FAQ

How does a HCVSD Academy differ from my high school's program?

- 4 years of sequential cohesive technical education curriculum
- Multiple college credits and certifications
- Career focused student organizations
- Professional Advisory Board comprised of collegiate professors and industry professionals
- Structured learning experiences through internships and mentorships.

FOR MORE INFORMATION

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EQUAL OPPORTUNITY | AFFIRMATIVE ACTION STATEMENT

It is the policy of the Hunterdon County Polytech School District not to discriminate on the basis of race, color, creed, religion, sex, ancestry, national origin, social or economic status, or disability in the education programs or activities and employment policies are required by Title IX of the Educational Amendments of 1972 and N.J.A.C. 6:4-1.1 et. Seq. Inquiries regarding compliance may be directed to our affirmative Action Office at 908-788-1119 ext. 2003.



HUNTERDON COUNTY VOCATIONAL SCHOOL DISTRICT

COMPUTER SCIENCE

BY 2020 THERE WILL BE
1.4 MILLION
COMPUTING JOBS



Women earn **57%** of all undergraduate degrees, but only **18%** of degrees are in computer and information sciences.



71% of all new jobs in STEM are in computing. Only 8% of STEM graduates are in computer science.

WWW.HCVSD.ORG

[@CSAEACADEMY](https://www.facebook.com/csaeacademy)



WWW.HCVSD.ORG

COMPUTER SCIENCE & APPLIED ENGINEERING ACADEMY

The Computer Science and Applied Engineering Academy (CSAEA) employs a rigorous, highly focused four-year program for students with career interests in Computer Science. The CSAEA utilizes a specialized curriculum that combines resources from Project Lead the Way and multiple colleges and universities. This provides students with education in various platforms and coding languages. Students collaborate on team projects that emulate real-world career tasks. Students are also exposed to specializations in Computer Science, such as simulation and modeling, artificial intelligence, and cybersecurity.

The HCVSD Academy model offers a unique and comprehensive approach to career and technical education. Students enroll in four years of a cohesive and multi-faceted computer science curriculum in partnership with Fairleigh Dickinson University. This provides students with multiple opportunities to earn college credits while in high school. Students participate in structured learning experiences such as internships and mentorships that are relevant to their intended college and career pathways. Additionally, students participate in career-focused extracurricular student organizations, exposing students to both local and national competitions, as well as scholarship opportunities.



CSAEA students take academic courses through Voorhees High School (VHS). VHS offers a wide range of coursework in their program of studies, including many Honors and AP options.



CSAEA I

Students will be introduced to a variety of topics in their first year, including algorithms, graphics, graphical user interfaces, basic control circuits, and simulation and modeling. Students will also experiment with Scratch, App Inventor, Python, and NetLogo.



CSAEA II

The second year of the curriculum will focus on the Internet, introducing students to protocols and bandwidth, security and cryptography, languages such as HTML5, CSS, databases, SQL, PHP, and JavaScript, visualizing data, Firefox, and Python. In addition, this course will prepare students for the AP Computer Science Principles exam.



CSAEA III

In their third year, students will focus on further developing their computational thinking skills through the medium of Android™ App development for mobile platforms. The course utilizes industry-standard tools such as Android Studio, Java™ programming language, XML, and device emulators. This course prepares students for the AP Computer Science A exam.



CSAEA IV

Students will be introduced to the tools and concepts of cybersecurity and are encouraged to create solutions that allow people to share computing resources while protecting privacy. This course also raises students' knowledge of and commitment to ethical computing behavior. The curriculum culminates in students completing a capstone project, where teams of students will design and deliver software solutions to real-world problems.