

Computer science an alternative to selected math, science courses under new law

Gov. John Kasich (R-Westerville) recently signed House Bill 170 – legislation that adds computer science instruction as an option to several of the prescribed subjects in the state minimum high school curriculum – into state law effective March 22, 2018.

Under current law, students are required to complete 20 units of study in specified subject areas as the minimum high school curriculum for a diploma. The new law adds computer science as an additional option to several subjects.

The current curriculum requires four units of math; one unit must be Algebra II or its equivalent (except for career-tech students). The new law adds advanced computer science as an alternative to Algebra II. However, Algebra II is an admissions requirement at some universities. For that reason, H.B. 170 includes a requirement that parents and guardians be notified that substituting computer science for Algebra II could impact a student's ability to be accepted at some universities.



Three units of science are required under the current curriculum, including one unit each in physical science, life science, and advanced study in: 1) chemistry, physics or other physical science, 2) advanced biology or other life science, or 3) astronomy, physical geology, or other earth or space science. The new law adds computer science as a fourth option for the one unit of advanced study. However, it prohibits computer science from being substituted for any life sciences or biology course.

“As we all know, science and technology are subjects that are more important now than ever, and their applications are felt across nearly every sector of our economy,” said Rep. Rick Carfagna (R-Westerville), who co-sponsored H.B. 170 with Rep. Mike Duffey (R-Worthington). “This bill will bring computer science to the forefront, and will begin the discussion as to how to prepare our future generations to be leaders in science and technology.”

A variety of business and education groups offered testimony in support of the bill, including Jennie Zemberlan, founder and president of Avantia, Inc., a Cleveland information technology firm. According to Zemberlan, the IT industry forecasts a 23 percent increase in software developer jobs over the next 10 years and a one-million worker shortage as early as this year.

“The critical thinking and creative problem solving skills gained through computer science curriculum are foundational to almost all other career paths,” she told the Senate Education Committee.

The new law is not a mandate; rather, schools and districts may opt to implement its curriculum changes.

Generally, schools will be required to employ only individuals who are licensed in computer science or hold a license endorsement in computer technology to teach computer courses, but permits licensed individuals to teach such courses if the individual qualifies for a supplemental teaching license for computer science.

The State Board of Education must adopt academic content standards and a model curriculum for computer science by Dec. 31, 2018. The Board is also required to establish rules for supplemental teaching licenses for computer science.