



OHIO LEGISLATIVE SERVICE COMMISSION

Final Analysis

Carol Napp

Sub. H.B. 170

132nd General Assembly
(As Passed by the General Assembly)

Reps. Carfagna and Duffey, Brenner, LaTourette, Reineke, Boggs, Hambley, Koehler, Anielski, Antani, Arndt, Ashford, Blessing, Craig, Dever, Edwards, Gavarone, Ginter, Green, Hagan, Howse, Huffman, Kent, Lanese, Leland, Manning, Miller, Pelanda, Perales, Rezabek, Ryan, Schaffer, Scherer, Slaby, R. Smith, Stein, Sweeney, Young

Sens. Coley, Terhar, Bacon, Balderson, Beagle, Dolan, Eklund, Gardner, Hackett, Hoagland, Hottinger, Kunze, LaRose, Lehner, O'Brien, Oelslager, Peterson, Sykes, Tavares, Uecker, Wilson, Yuko

Effective date: March 23, 2018

ACT SUMMARY

Computer science education

- Requires the State Board of Education, by December 31, 2018, to adopt academic content standards and a model curriculum for computer science.
- Adds computer science instruction as an option to several of the prescribed subjects in the state minimum high school curriculum, but prohibits substitution for life sciences or biology courses.
- Permits a student to choose to apply instruction in computer science as one unit of math or science, regardless of the teacher's field of certification, provided the teacher meets the act's licensure and professional development requirements.
- Generally requires schools to employ only individuals who are licensed in computer science or hold a license endorsement in computer technology to teach computer science courses, but permits licensed individuals to teach the courses if the individual qualifies for a supplemental teaching license for computer science.

* This version updates the effective date.

- Requires completion of an Advanced Placement computer science professional development program to teach Advanced Placement computer science.
- Authorizes school districts, educational service centers, community schools, and STEM schools to establish computer science and technology funds to support computer science programs and professional development.

Auxiliary Services funding

- Permits a chartered nonpublic school that is not religiously affiliated to elect to receive Auxiliary Services funding directly, rather than from the school district in which the school is located.
- Permits chartered nonpublic schools that receive Auxiliary Services funding directly to contract with school districts for certain health services, support services, scoring services for standardized tests, and security services for which that funding may be used under continuing law.
- Makes other changes regarding the administration of Auxiliary Services funding paid directly to chartered nonpublic schools.

CONTENT AND OPERATION

Computer science standards and curriculum

The act requires the State Board of Education, by December 31, 2018, to adopt academic content standards and a model curriculum specifically for computer science in grades kindergarten through 12, including standards for introductory and advanced computer science courses in grades 9 through 12. It further directs the State Board, when developing the standards and curriculum, to consider recommendations from computer science education stakeholder groups, including teachers and representatives from higher education, industry, and Ohio and national computer science organizations.

The act explicitly authorizes any school district or school to utilize the standards and curriculum, but it also specifies that a district or school cannot be required to utilize all or any part of the standards or curriculum.¹

¹ R.C. 3301.079(A)(4).

Computer science in the high school curriculum

Continuing law prescribes 20 units of study in specified subject areas as the minimum high school curriculum for a diploma from a public school or a chartered nonpublic school. (Each unit is a minimum of 120 hours of instruction, except a laboratory course, for which one unit is a minimum of 150 hours.)

The act adds computer science instruction as an option to several of the prescribed subjects in that curriculum. However, if a student chooses to substitute more than one computer science course to satisfy curriculum requirements, the courses must be sequential and progressively more difficult or cover different subject areas within computer science.²

Math

The curriculum requires four units of math. Prior law specified that one unit must be Algebra II, or its equivalent, or a career-based pathway math course for career-technical students. The act adds advanced computer science as an alternative to Algebra II. Nevertheless, if a student chooses to substitute advanced computer science for Algebra II, the school must communicate to the student that some institutions of higher education may require Algebra II for college admission. In addition, the student's parent, guardian, or legal custodian must sign and submit to the school a document acknowledging that not taking Algebra II may have an adverse effect on college admission decisions.³

Science

Three units of science are required under the curriculum, including one unit each in physical science, life sciences, and advanced study. Prior law limited the advanced study to (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 act adds computer science as a fourth option for the one unit of advanced study. On the other hand, it prohibits computer science from being substituted for any life sciences or biology course.⁴

² R.C. 3313.603(N).

³ R.C. 3313.603(C)(3).

⁴ R.C. 3313.603(C)(5).



Student choice of math or science credit for computer science

The act specifies that a student may apply instruction in computer science as either one unit of math or one unit of science, regardless of the field of certification of the teacher who teaches the class, provided the teacher (1) meets the licensure requirements prescribed by the act (see below), and (2) prior to teaching the course, completes a professional development program determined to be appropriate by the district board (or school governing authority in the case of other public schools and nonpublic schools).⁵

Electives

The act specifies that computer science may fulfill elective units in the curriculum. Five of the 20 required units are elective units, which may be taken from a variety of subject areas.⁶

Alternative curriculum

Certain students who entered ninth grade before July 1, 2016, may receive their high school diplomas without completing the standard requirements if they complete, instead, a slightly different 20 units of instruction and meet other conditions. That alternative curriculum also requires four units of math. Under prior law, one math unit could be "computer programming." The act replaces computer programming with "computer science."⁷

Qualification to teach computer science

To teach computer science courses, the act generally requires individuals to either (1) hold an educator license in computer science or (2) hold a license endorsement in computer technology and pass a computer science content examination. However, the act also authorizes districts to employ an individual who holds any valid educator license to teach computer science courses, so long as the individual qualifies for a supplemental teaching license in computer science.

To qualify for a supplemental teaching license, the individual must meet requirements established by rule of the State Board. Those requirements must include the following:

⁵ R.C. 3313.603(N).

⁶ R.C. 3313.603(C)(8).

⁷ R.C. 3313.603(D)(5)(b)(i)(II).



(1) The individual passes a content examination in computer science; and

(2) After at least two years of teaching computer science under the supplemental license, the individual must be permitted to advance to a standard educator license by completing a pedagogy course for the applicable grade levels. An individual may be exempt from this requirement if the individual has previously completed a pedagogy course for the applicable grade levels.⁸

Additional qualification to teach AP courses

To teach Advanced Placement (AP) computer science courses, the act requires individuals, in addition to completing the licensure requirements described above, to complete a professional development program provided by the College Board (the organization that administers the AP program). The program may be completed at any time during the year.⁹

Computer science described

The act prescribes a definition for computer science to apply throughout the primary and secondary education code. It states that computer science means "logical reasoning, computing systems, networks and the Internet, data and analysis, algorithms and programming, impacts of computing, and structured problem solving skills applicable in many contexts from science and engineering to the humanities and business."¹⁰

Computer science and technology funds

The act authorizes the board of a school district, educational service center, community school, or STEM school to establish a computer science and technology fund, which may be used for any of the following:

(1) Professional development related to computer science programs;

(2) Delivery of online assessments, including instruction and data that support online assessment readiness;

(3) Wireless connectivity in school buildings;

⁸ R.C. 3319.236(A) and (B).

⁹ R.C. 3319.236(C).

¹⁰ R.C. 3301.012.



(4) Network services, such as improving bandwidth capacity and filtering devices; and

(5) Purchase of computers, tablets, and equipment.

The fund may consist of (1) district or school moneys that legally may be used for that purpose and are not otherwise designated, (2) privately donated moneys, and (3) any future state moneys allocated to the district or school for that purpose. The district or school also may use moneys in the fund to leverage or match additional private donations for that purpose.¹¹

Payment of Auxiliary Services funds

Background

State Auxiliary Services funds are used to purchase goods and services for students who attend chartered nonpublic schools, such as textbooks, digital texts, workbooks, instructional equipment, library materials, or tutoring or other special services. Law enacted by H.B. 49 of the 132th General Assembly, effective September 29, 2017, required the Department of Education to pay those funds directly to each chartered nonpublic school that does not have a religious affiliation or curriculum. Prior to H.B. 49, Auxiliary Services funds for students in any chartered nonpublic school were paid to the school district in which the school is located, and the purchases were made by the district for those students. H.B. 49 maintained this pass-through funding process for students in a chartered nonpublic school with a religious affiliation.

Election to receive funds directly

The act permits a chartered nonpublic school that is not religiously affiliated to choose whether to receive Auxiliary Services funds directly or through the school district in which it is located.¹²

To receive funding directly, a chartered nonpublic school that is not religiously affiliated must elect, by April 1 of each odd-numbered year, to receive the funding directly for the biennium that begins the following July 1. In making this election, the school must (1) notify the Department and the district in which it is located and (2) submit to the Department an affidavit certifying that it is not religiously affiliated.¹³

¹¹ R.C. 3314.0110, 3315.17, and 3326.082.

¹² R.C. 3317.024(E) and 3317.062.

¹³ R.C. 3317.024(E).



For the current FY 2018-FY 2019 biennium, a chartered nonpublic school that is not religiously affiliated may notify the Department and the district in which it is located if it wishes to return to receiving Auxiliary Services funding from the school district until the end of the biennium. This notification must occur within 30 days after the act's March 23, 2018, effective date. If no notification is provided within that time, the school will continue to receive Auxiliary Services funding directly until the end of the biennium (June 30, 2019).¹⁴

Contracts with school districts

The act provides that chartered nonpublic schools that receive Auxiliary Services funding directly may contract with school districts for certain health services, support services, scoring services for standardized tests, and security services for which that funding may be used under continuing law. Law unchanged by the act also permits these schools to contract for this purpose with educational services centers, the Department of Health, city or general health districts, or private agencies.¹⁵

Additionally, the act specifies that, for the 2017-2018 school year, neither a school district nor a chartered nonpublic school may change an agreement or contract for services provided by the district for the school without the consent of the other party because the school chose to receive Auxiliary Services funding directly from the state.¹⁶

Administration of payments

The act makes the following changes regarding the administration of Auxiliary Services funding paid directly to chartered nonpublic schools:

--Requires that any interest earned by a school that receives this funding directly must be used by the school for the same purposes and in the same manner as the original payments.

--Requires the Department to adopt a rule specifying the party that owns any property purchased with this funding and procedures for disposal of the property by the designated owner.

--Requires each school that receives this funding to remit to the Department, within 30 days after the end of the biennium, all moneys paid to it directly for that

¹⁴ Section 3.

¹⁵ R.C. 3317.062(A)(5).

¹⁶ Section 4.



biennium and any interest earned on those moneys that are not required to pay expenses incurred during the biennium.

--Provides for any school that remits funding to apply to, and receive from, the Department a refund if the remittal of moneys leaves the school with insufficient money to pay all valid expenses incurred during the biennium.¹⁷

HISTORY

ACTION	DATE
Introduced	03-29-17
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Passed Senate (31-0)	12-05-17
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¹⁷ R.C. 3317.062(C), (E), and (F).

