

SENATE, No. 2032

STATE OF NEW JERSEY
216th LEGISLATURE

INTRODUCED MAY 5, 2014

Sponsored by:

Senator RICHARD J. CODEY
District 27 (Essex and Morris)

Co-Sponsored by:

Senator Pou

SYNOPSIS

Requires public school students in grades 6 through 12 to take courses in computer science.

CURRENT VERSION OF TEXT

As introduced.



(Sponsorship Updated As Of: 6/24/2014)

1 AN ACT concerning computer science education and supplementing
2 chapter 35 of Title 18A of the New Jersey Statutes.

3

4 **BE IT ENACTED** by the Senate and General Assembly of the State
5 of New Jersey:

6

7 1. The Legislature finds and declares that:

8 a. Computer science is transforming industry, creating new
9 fields of commerce, driving innovation in all fields of science, and
10 bolstering productivity in established economic sectors.

11 b. The federal Bureau of Labor Statistics predicts that by the
12 year 2020, there will be 4.2 million jobs in computing and
13 information technology in the United States, putting these fields
14 among the fastest growing occupational fields.

15 c. The College Board reports that of the 3.4 million Advanced
16 Placement exams given in 2011, only about 20,000 of those were in
17 computer science.

18 d. In the 2012-2013 school year, only 9 states allowed
19 computer science courses to count toward secondary school core
20 graduation requirements, chilling student interest in computer
21 science courses.

22 e. Many states' middle and high school curriculums are almost
23 exclusively focused on skill-based aspects of computing and have
24 few standards on the conceptual aspects of computer science that
25 lay the foundation for innovation and deeper study in the field.

26 f. Computer science education has been encumbered by
27 confusion with technology education and the use of technology in
28 education, which are related but distinct concepts.

29 g. Exposing middle and high school students to computer
30 science education in New Jersey would give them a deeper
31 knowledge of the fundamentals of computing, yielding critical
32 thinking skills that will serve them throughout their lives in
33 numerous fields.

34 h. It is appropriate at this time that the Department of
35 Education and the school districts in the State revise curricula to
36 better educate young people in this important subject area and thus
37 better prepare our students for effective citizenship in the 21st
38 century.

39

40 2. Within 180 days of the effective date of this act, the State
41 Board of Education shall develop rigorous curriculum guidelines in
42 computer science at the middle and high school levels. The goal of
43 the curriculum guidelines shall be:

44 a. to prepare students to understand the nature of computer
45 science and its place in the modern world;

46 b. to foster an understanding that computer science interweaves
47 concepts and skills;

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1 c. to enable students to use computer science skills, primarily
2 computational thinking, in their problem-solving activities in other
3 subjects; and

4 d. to complement information technology and Advanced
5 Placement computer science curricula in school districts in which
6 they are currently offered.

7

8 3. Beginning in the 2015-2016 school year, a school district
9 shall require a student in grades 6 through 12 to complete a
10 continuum of courses in the field of computer science. The courses
11 shall be in conformance with the curriculum guidelines established
12 by the State board pursuant to section 2 of this act.

13

14 4. As used in this act, “computer science” means the study of
15 computers and algorithmic processes and includes the study of
16 computing principles, computer hardware and software design,
17 computer applications, and the impact of computers on society.

18

19 5. This act shall take effect immediately.

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22 STATEMENT

23

24 This bill requires the State Board of Education, within 180 days
25 of the effective date of bill, to develop rigorous curriculum
26 guidelines in computer science at the middle and high school levels.
27 Under the provisions of the bill, beginning in the 2015-2016 school
28 year, a student in grades 6 through 12 will be required to complete a
29 continuum of courses in the field of computer science, which will
30 be aligned with the curriculum guidelines established by the State
31 board.

32 The confusion over the terms and curriculum related to
33 computing, technology, and computer science is considered to be
34 one of the fundamental reasons why computer science standards,
35 course classification and credits, teacher certification programs, and
36 curriculum are inadequate or non-existent in our classrooms today.
37 In order to clarify the subject matter, the bill defines “computer
38 science” to mean the study of computers and algorithmic processes
39 and includes the study of computing principles, computer hardware
40 and software design, computer applications, and the impact of
41 computers on society.