

[First Reprint]

**ASSEMBLY, No. 3440**

**STATE OF NEW JERSEY**  
**216th LEGISLATURE**

INTRODUCED JUNE 23, 2014

**Sponsored by:**

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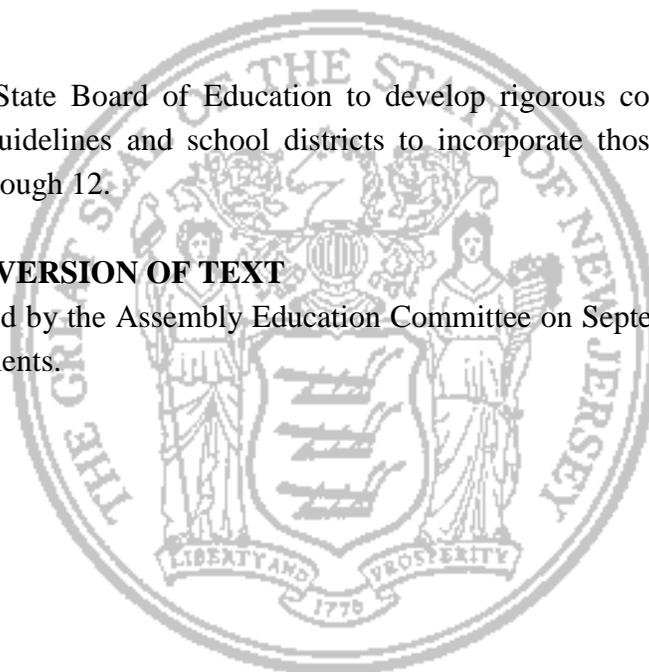
**Assemblyman Singleton, Assemblywoman Watson Coleman, Assemblymen Caputo, Benson, McKeon, Assemblywoman Muoio and Assemblyman Gusciora**

**SYNOPSIS**

Requires State Board of Education to develop rigorous computer science curriculum guidelines and school districts to incorporate those guidelines in grades six through 12.

**CURRENT VERSION OF TEXT**

As reported by the Assembly Education Committee on September 22, 2014, with amendments.



**(Sponsorship Updated As Of: 6/26/2015)**

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 21<sup>st</sup>  
38 century.

39

40 2. <sup>1</sup>**[Within 180 days of the effective date of this act, the]** The<sup>1</sup>  
41 State Board of Education shall develop rigorous curriculum  
42 guidelines in computer science at the middle and high school levels  
43 <sup>1</sup>that shall be incorporated within the existing Technology and

**EXPLANATION** – Matter enclosed in bold-faced brackets **[thus]** in the above bill is not enacted and is intended to be omitted in the law.

Matter underlined thus is new matter.

Matter enclosed in superscript numerals has been adopted as follows:

<sup>1</sup>Assembly AED committee amendments adopted September 22, 2014.

- 1 Science Core Curriculum Content Standards, where appropriate<sup>1</sup>.  
2 The goal of the curriculum guidelines shall be:  
3 a. to prepare students to understand the nature of computer  
4 science and its place in the modern world;  
5 b. to foster an understanding that computer science interweaves  
6 concepts and skills;  
7 c. to enable students to use computer science skills, primarily  
8 computational thinking, in their problem-solving activities in other  
9 subjects; and  
10 d. to complement information technology and Advanced  
11 Placement computer science curricula in school districts in which  
12 they are currently offered.  
13  
14 3. Beginning in the <sup>1</sup>~~2015-2016~~<sup>1</sup> school year <sup>1</sup>following the  
15 development by the State Board of Education of the curriculum  
16 guidelines pursuant to section 2 of this act<sup>1</sup>, a school district shall  
17 <sup>1</sup>~~require a student~~ incorporate, where appropriate, computer  
18 science curriculum guidelines<sup>1</sup> in grades 6 through 12 <sup>1</sup>~~to~~  
19 complete a continuum of courses in the field of computer science.  
20 The courses shall be ~~which are~~<sup>1</sup> in conformance with the  
21 curriculum guidelines <sup>1</sup>~~established~~ developed<sup>1</sup> by the State board  
22 <sup>1</sup>~~pursuant to section 2 of this act~~<sup>1</sup>.  
23  
24 4. As used in this act, “computer science” means the study of  
25 computers and algorithmic processes and includes the study of  
26 computing principles, computer hardware and software design,  
27 computer applications, and the impact of computers on society.  
28  
29 5. This act shall take effect immediately.