TO: The Honorable Members of the Board of Regents

FROM: James N. Baldwin

SUBJECT: Proposed Amendment of Sections 100.1, 100.4, and 80-4.3 of the Regulations of the Commissioner of Education Relating to Computer Science Being Considered a Career and Technical Education Subject

DATE: June 2, 2022

AUTHORIZATION(S):

SUMMARY

Issue for Discussion

Should the Board of Regents adopt the proposed amendment of sections 100.1 100.4 and 80-4.3 of the Regulations of the Commissioner of Education relating to computer science being considered a career and technical education subject?

Reason for Consideration

Review of Policy.

Proposed Handling

The proposed amendment is submitted to the Full Board for discussion at the June 2022 Board of Regents meeting. A copy of the proposed amendment is included as (Attachment A).

Procedural History

A Notice of Proposed Rule Making will be published in the State Register on June 29, 2022, for a 60-day public comment period. Supporting materials are available upon request to the Secretary of the Board of Regents.

Background Information

In March 2018, a new certification and tenure area were created in computer science (all grades). The Board of Regents approved the NYS K-12 Computer Science

and Digital Fluency Learning Standards in December 2020. This marked the first time since the adoption of the original standards areas in 1996 that the Board introduced, and adopted, grade-level specific learning standards in a new content area.

Districts have been offering computer science coursework in many forms for years. For example, it is offered for elective credit as part of Career and Technical Education (CTE) Computer Technology programs and as a third unit of required credit in mathematics or science. Additionally, in K-8 classrooms, it has been integrated into other disciplines and offered as stand-alone curricular experiences. The skills and concepts of computer science are connected to and have applications across, many curricular areas. This required the Department to determine how this new content area would fit into the program requirements outlined for schools and be used by students to meet the requirements outlined in Part 100 of the Commissioner's regulations.

The Department consulted with stakeholders from across the state and formed a policy workgroup to discuss the pertinent questions and identify what, if any, regulatory changes needed to be considered. This workgroup considered policy questions including: will computer science be considered solely an academic discipline similar to math and science? Will it be offered as a CTE subject leading to +1 Pathway toward a diploma? Or should computer science span both areas, giving districts the flexibility to continue offering all the types of programming they now offer as well as expand offerings to meet the needs and interests of their students? What courses will holders of the new computer science teaching certificate and Statement of Continued Eligibility (SOCE) be permitted to teach, and how will those courses be used to enable students to meet various academic requirements? Workgroup members included representatives from the New York City Department of Education; boards of cooperative educational services (BOCES); urban, rural, and suburban districts; districts with CTE programs as well as stand-alone and advanced offerings in computer science; and professional organizations.[1]

This policy workgroup met between January and March of 2022. The workgroup reached a consensus that it was important to provide as much flexibility as possible to maintain, sustain, and grow offerings in computer science and facilitate the implementation of the Computer Science and Digital Fluency standards in school buildings across the state. Based on this feedback, the Department developed policy and regulatory recommendations to include computer science as a CTE subject area. This provides the greatest flexibility to districts and students in how they use computer science coursework to meet diploma and program requirements.   Stakeholders including the NYS Association of Career and Technical Education Administrators (ACTEA), The New York State Association of Career and Technical Education Educators (NYSACTE), New York State United Teachers (NYSUT), New York State Council of School Superintendents (NYSCOSS), School Administrators Association of New York State (SAANYS), the BOCES Superintendents, and the Big 5 school districts overwhelmingly supported this flexibility.

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[1] Work group members and the organizations with which they are affiliated can be found in Attachment B.

Therefore, the Department recommends that computer science be added under the umbrella of CTE subjects as defined in Commissioner's regulations. The inclusion of computer science as a CTE subject area will yield several beneficial outcomes and create flexibility for districts to both integrate computer science offerings into their educational programs and maintain programs as they exist now within New York State schools, districts, and BOCES. The benefits of considering computer science as a CTE subject include the following:

- Computer science in grades 5-8 could be used to meet the middle-level 1.75-unit CTE requirement.

- Considering the shortage of CTE teachers in nearly all areas, adding computer science as an eligible CTE subject to meet the middle-level requirement would help schools, especially our high need schools, by expanding the pool of eligible teachers to deliver the 1.75-unit middle level requirement.

- Computer science in grades 9-12 could be used as CTE coursework to meet career development and occupational studies (CDOS) commencement credential and CDOS +1 pathway requirements, increasing graduation options for students.

- Computer science in grades 9-12 could be used towards a five-unit CTE sequence in CTE leading to a Regents Diploma with Advanced Designation.

- Districts would have the ability to apply for NYSED CTE program approval for computer science programs in grades 9-12, opening opportunities for LEAs and BOCES to offer programs in a high-skill, high-wage, high-demand field leading to various industry credentials as well as the technical endorsement for students.

- Eligible schools and BOCES with Department-approved CTE programs could utilize Carl D. Perkins Career and Technical Education Act funding to improve computer science instruction.

- As CTE teachers, computer science teachers would be eligible to teach career and financial management and obtain the extension of Coordinator of Work-Based Learning Programs for Career Development. Computer science teachers would also be better able to connect the classroom to the real world with this flexibility.

This regulatory change would not impact existing computer science offerings leading to math or science credit, or elective credit. It would simply add the flexibility of utilizing computer science courses to meet requirements in CTE where appropriate.

Proposed Amendments

As described above, the Department now recommends that the Board consider amendments to sections 100.1 and 100.4 of the Commissioner's regulations to allow schools and BOCES the flexibility to utilize computer science to meet CTE requirements and allow teachers holding a valid Computer Science certificate to obtain the extension in Coordinator of Work-Based Learning Programs for Career Development.

The proposed amendments to section 100.1 of the Commissioner's regulations add computer science to the specific disciplines that may be included in CTE instruction in grades seven through twelve and makes other technical clarifying amendments. The proposed amendment to section 100.4 makes amendments to the unit of study requirement for CTE in grades seven and eight to include computer science in the list of CTE disciplines.

The Department also proposes to amend section 80-4.3 of the Commissioner's regulations to allow candidates who hold a valid Initial, Emergency COVID-19, or Professional Computer Science (All Grades) certificate to be eligible for the extension in Coordinator of Work-Based Learning Programs for Career Development. Currently, candidates who hold a valid Initial, Emergency COVID-19, Permanent, or Professional CTE certificate, or a certificate in the CTE subject areas of agriculture, business and marketing, family and consumer sciences, or technology education, are eligible for this extension. Because the proposed amendment makes computer science a CTE subject area, allowing candidates who hold a computer science certificate to be eligible for the extension is consistent with other candidates who hold a certificate in a CTE subject area and are eligible for the extension.

Related Regents Items

April 2021: Proposed Amendment of Section 52.21 of the Regulations of the Commissioner of Education Relating to the Content Core Requirement in Computer Science Teacher Preparation Programs.
(https://www.regents.nysed.gov/common/regents/files/4211brca2.pdf)

December 2020: Approval of the K-12 Learning Standards in Computer Science and Digital Fluency
(https://www.regents.nysed.gov/common/regents/files/1220p12a2.pdf)

March 2018: Proposed Amendments to Part 30 of the Regents Rules and §52.21 and Part 80 of the Regulations of the Commissioner of Education Relating to a New Certification Area and Tenure Area for Computer Science.
(https://www.regents.nysed.gov/common/regents/files/318hea2.pdf)

Recommendation

Not applicable.

Timetable for Implementation

It is anticipated that the proposed amendment will be presented for permanent adoption at the October 2022 Regents meeting, after publication of the proposed amendment in the State Register and expiration of the 60-day public comment period required under the State Administrative Procedure Act. If adopted at the October 2022 meeting, the proposed amendment will become effective on October 19, 2022.

AMENDMENT TO THE REGULATIONS OF THE COMMISSIONER OF EDUCATION

Pursuant to sections 101, 207, 208, 209, 211, 305, 308, 3001, 3004, and 3009 Education Law.

1. Subdivision (l) of section 100.1 of the Regulations of the Commissioner of Education is amended to read as follows:

(l) Career and technical education mean a kindergarten through adult program area of study that includes rigorous academic content closely aligned with career and technical subject matter, using the State learning standards of career development and occupational studies as a framework. In grades seven [nine] through twelve, career and technical education include the specific disciplines of [agriculture] agricultural education, business, and marketing education, computer science education, family, and consumer [science] sciences education, health [occupations] sciences education, [technical] technology education and [trade/industrial] trade and technical education.

2. Subparagraph (xii) of paragraph (1) of subdivision (c) of section 100.4 of the Regulations of the Commissioner of Education is amended to read as follows:

(xiii) for students in schools that have vacancies in teacher positions for the courses described in subparagraphs (v) and (vi) of this subdivision during the 2017-2018 school year, and for all students in the 2018-2019 school year and thereafter, career and technical education (*i.e.*, technology education, family and consumer sciences, trade, and technical subjects, business, computer science, agriculture, and/or health sciences), for a total of one and three-fourths units of study.

3. Subparagraph (i) of paragraph (2) of subdivision (f) of section 80-4.3 of the Regulations of the Commissioner of Education is amended to read as follows:

(i) The candidate shall hold a valid provisional, permanent, initial, emergency COVID-19, professional certificate for classroom teaching service authorizing instruction in any specific career and technical education title, or in agriculture (all grades), family and consumer sciences (all grades), business and marketing (all grades), <u>computer science (all grades),</u> or technology education (all grades).

COMPUTER SCIENCE/CAREER AND TECHNICAL EDUCATION
POLICY WORKGROUP

NAME	TITLE	ORGANIZATION	GROUP AFFILIATION
Dr. Gerald Ardito	Associate Professor, Computer Science Education	Manhattanville College	Teacher Preparation Programs in Computer Science
Kevin Casey	Executive Director	School Administrators Association of New York State	School Administrators Association of New York State
Sarah Chauncey	District Superintendent	Rockland BOCES	District Superintendents
David Czechowski	Technology Education Teacher	Hyde Park Central School District	Computer Science Teachers' Association
Connie Costley	Retired Family and Consumer Sciences Teacher	Kingston City School District	New York State Association for Career and Technical Education
Dr. Charles Dedrick	Executive Director	New York State Council of School Superintendents	New York State Council of School Superintendents
Dr. Donna DeSiato	Superintendent of Schools	East Syracuse Minoa Central Schools	New York State Council of school Superintendents
James Dexter	District Superintendent	Warren-Saratoga-Washington-Hamilton Essex BOCES	District Superintendents
Jolene DiBrango	Executive Vice President	New York State United Teachers	New York State United Teachers
Michael DiMezza	Director of Career and Technical Education	Hamilton Fulton Montgomery BOCES	Association of Career and Technical Education Administrators
Daniel Gaylord	Computer Science Education Manager	New York City Department of Education	New York City Department of Education
Kelly Houck	District Superintendent	Schuyler-Steuben-Chemung-Tioga-Allegany BOCES	District Superintendents
Nasser Ibrahim	Director of Instructional Technology and Science	Yonkers Public Schools	Big 4 Districts

NAME	TITLE	ORGANIZATION	GROUP AFFILIATION
Jeffrey Matteson	District Superintendent	Tompkins-Seneca-Tioga BOCES	District Superintendents
Kevin MacDonald	District Superintendent	Genesee Valley BOCES	District Superintendents
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Dr. Marijo Pearson	Assistant Superintendent for Curriculum, Instruction, and Professional Development	Monroe 2-Orleans BOCES	Staff/Curriculum Development Network
David Rothfuss	Research and Educational Services Associate	New York State United Teachers	New York State United Teachers
Dr. Raisa Schwanbeck	Associate Director, School Design	New York City Department of Education	New York City Department of Education
Rebecca Stretkowicz	Culinary Careers Teacher	Hamilton Fulton Montgomery BOCES	New York State Association of Career and Technical Education
Ronald Summers	Executive Director of Computer Science Education	New York City Department of Education	New York City Department of Education
Anedda Trautman	Director of Career and Technical Education	Erie 1 BOCES	Association of Career and Technical Education Administrators
Harini Venkatesh	Executive Director, Career and Technical Education	New York City Department of Education	New York City Department of Education
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