STATE BOARD of ELEMENTARY and SECONDARY EDUCATION

P.O. Box 94064, Capitol Station, Baton Rouge, LA 70804-9064 · PHONE: 225-342-5840 · FAX: 225-342-5843

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State Superintendent

March 13, 2023

MEMORANDUM

TO: Senator Patrick Page Cortez, Senate President
Representative Clay Schexnayder, Speaker of the House
Senator Cleo Fields, Chair, Senate Committee on Education
Representative Lance Harris, Chair, House Committee on Education

FROM: Shan N. Davis, Executive Director
Board of Elementary and Secondary Education

RE: Summary Report on Board of Elementary and Secondary Education Proposed Rulemaking

The Board has received three (3) public comments and has not conducted a hearing pursuant to R.S. 49:953(A)(2)(a).

The Louisiana State Board of Elementary and Secondary Education met in regular session on March 8, 2023, and took the following action:

On motion of Mr. Melerine, seconded by Mr. Roque, the Board:

1. received the SPCAR regarding revisions to Bulletin 741, *Louisiana Handbook for School Administrators*, and Bulletin 741 (Nonpublic) *Louisiana Handbook for Nonpublic School Administrators;*
2. authorized BESE staff to submit the summary report to the Legislative Oversight Committees; and
3. directed BESE staff to proceed with the final adoption of the January 20, 2023, Notice of Intent regarding revisions to Bulletin 741 and 741NP with the submission of the final Rule in the April 2023 edition of the *Louisiana* Register.

The Board has made no change to the proposed Rule.

Subject to legislative oversight by either the House Committee on Education or Senate Committee on Education, the Board will proceed with the adoption of the Notice of Intent as a final Rule in the April 20, 2023, issue of the *Louisiana Register.*

The following documents are attached:

1. A copy of the Notice of Intent;
2. Summary of Public Comments and Agency Response;
3. Public comment from Dr. Juana Moreno, Louisiana State University, dated February 9, 2023;
4. Letters from Mr. Anthony Owen, Code.org; dated February 10, 2023; and Mr. Frank Neubrander, Louisiana State University, dated March 6, 2023.

Please contact Erin LeBlanc at (225) 342-5841 if the Board may be of any assistance to you concerning this Rule.

SND:ell

Attachments (4)

c: Shalyric Self, Secretary, Senate Committee on Education
Cheryl Serrett, Analyst, Senate Committee on Education
Elizabeth Borne, Legislative Analyst, House Committee on Education
Lisa Lovello, Legislative Analyst, House Committee on Education
Ashley Townsend, Policy Director, Louisiana Department of Education
Shan N. Davis, Executive Director, BESE
Kevin Calbert, Communications Manager, BESE

Attachment 1

operating budget. The proposed rules will have no associated implementation costs or savings to local governmental units. The proposed rule exempts pesticides containing 2,4-D choline salt from the application restrictions set forth in LAC 7:XXIII.1103(C) only when being applied by commercial pesticide applicators to certain 2,4-D resistant crops.

II. ESTIMATED EFFECT ON REVENUE COLLECTIONS OF STATE OR LOCAL GOVERNMENTAL UNITS (Summary)

The proposed rules are not anticipated to have any effect on revenue collections for state or local government entities.

III. ESTIMATED COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS, SMALL BUSINESSES, OR NONGOVERNMENTAL GROUPS (Summary)

Commercial pesticide applicators may have an economic benefit from reduced paperwork/documentation costs because they would be exempt from obtaining a paper waiver from LDAF for the application of 2,4-D choline salt pesticide to the 2,4-D resistant crops of soybeans, cotton and corn crops during April 1 through September 15.

IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)

The proposed rules are not anticipated to impact competition and employment.

Dane Morgan
Asst. Commissioner
2301#032

Alan M. Boxberger
Interim Legislative Fiscal Officer
Legislative Fiscal Office

NOTICE OF INTENT

Board of Elementary and Secondary Education

Foreign Languages
(LAC 28:LXXIX.2109, 2111, 2317, 2323;
and CXV.2318, 2319, 2345, and 2353)

In accordance with the provisions of R.S. 17:6(A)(10) and the Administrative Procedure Act (APA), R.S. 49:953(B)(1) et seq., the Board of Elementary and Secondary Education proposes to amend LAC 28:CXV in *Bulletin 741—Louisiana Handbook for School Administrators* and LAC 28:LXXIX in *Bulletin 741—Louisiana Handbook for Nonpublic School Administrators*. The proposed revisions classify computer science and indigenous languages as foreign languages to align the TOPS University Diploma requirements with the Taylor Opportunity Program for Students (TOPS) core curriculum pursuant to Act 502 of the 2022 Regular Legislative Session and provide for considerations related to course credit.

Title 28
EDUCATION
Part LXXIX. Bulletin 741—Louisiana Handbook for Nonpublic School Administrators
Chapter 21. Curriculum and Instruction
Subchapter C. Curriculum and Instruction
§2109. High School Graduation Requirements

A. …

B. - C.7. Repealed

D. - F.3.b. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 17:6(A)(10), (11), and (15), 17:7(6), 17:10, 17:22(6), 17:391.1-391.10, and 44:411.

HISTORICAL NOTE: Promulgated by the Board of Elementary and Secondary Education, LR 29:2351 (November 2003), amended LR 30:2776 (December 2004), LR 31:3081 (December 2005), LR 34:2099 (October 2008), LR 36:2849 (December 2010), LR 37:2142, 2144 (July 2011), repromulgated LR 37:2390 (August 2011), amended LR 37:2597 (September 2011), LR 38:769 (March 2012), LR 38:1008 (April 2012), LR 39:1444 (June 2013), LR 40:1682 (September 2014), LR 40:2535 (December 2014), LR 41:915 (May 2015), LR 41:1485 (August 2015), LR 41:2127 (October 2015), LR 42:1064 (July 2016), LR 43:1289 (July 2017), LR 45:38 (January 2019), LR 45:1456 (October 2019), LR 46:1084 (August 2020), amended LR 48:34 (January 2022), LR 48:2098 (August 2022), LR 49:

§2111. State Diploma

A. - B.1. …

B.1.a. Repealed

B.1.b. - E. …

AUTHORITY NOTE: Promulgated in accordance with R.S. 17:6(A)(10), (11), and (15), R.S. 17:7(6), R.S. 17:10, R.S. 17:22(6), R.S. 17:391.1-391.10, and R.S. 44:411.

HISTORICAL NOTE: Promulgated by the Board of Elementary and Secondary Education, LR 29:2351 (November 2003), amended LR 31:636 (March 2005), LR 31:3082 (December 2005), LR 36:1498 (July 2010), LR 39:1446 (June 2013), LR 48:38 (January 2022), LR 48:2560 (October 2022); LR 49:

Chapter 23. High School Program of Studies
§2317. Foreign Languages

A. The foreign language course offerings shall be as follows.

Course Title(s)	Units
* * *	
Cambridge AICE—AS (Honors): Japanese	1
AP Computer Science A	1
Computer Science	1
Computer Coding as a Foreign Language I, II	1 each
Indigenous Languages I, II	1 each

B. AP Computer Science A shall be used as either an elective, math, or foreign language credit.

C. Computer Coding as a Foreign Language shall be aligned to a coding language approved by the Louisiana Workforce Commission to the industry based certification state focus list.

1. The instructor shall be certified in computer science.

AUTHORITY NOTE: Promulgated in accordance with R.S. 17:6(A)(10), (11), and (15), R.S. 17:7(6), R.S. 17:10, R.S. 17:22(6), R.S. 17:391.1-391.10, and R.S. 17:411.

HISTORICAL NOTE: Promulgated by the Board of Elementary and Secondary Education, LR 29:2354 (November 2003), amended LR 31:3086 (December 2005), LR 38:770 (March 2012), LR 40:1685 (September 2014), LR 40:2538 (December 2014), LR 45:1458 (October 2019), LR 49:

§2323. Mathematics

A. – B. …

* * *

C. AP Computer Science A shall be used as either an elective, math, or foreign language credit.

AUTHORITY NOTE: Promulgated in accordance with R.S. 17:6(A)(10), (11), and (15), R.S. 17:7(6), R.S. 17:10, R.S. 17:22(6), R.S. 17:391.1-391.1, and R.S. 44:411.

HISTORICAL NOTE: Promulgated by the Board of Elementary and Secondary Education, LR 29:2354 (November 2003), amended LR 30:2776 (December 2004), LR 31:3086 (December 2005), LR 34:2101 (October 2008), LR 36:2849 (December 2010), LR 38:771 (March 2012), LR 39:1449 (June 2013), LR 40:1685 (September 2014), LR 40:2538 (December 2014), LR 42:1064 (July 2016), LR 49:

Part CXV. Bulletin 741—Louisiana Handbook for School Administrators

Chapter 23. Curriculum and Instruction

Subchapter A. Standards and Curricula

§2318. The TOPS University Diploma

A. - A.2. Repealed

B. Assessment Requirements

1. - 1.c. Repealed

2. - 2.c. ...

d. Repealed

3. - 7.d.…

C. Minimum Course Requirements

1. - 2.j. Repealed

3. - 3.j. ...

4. - 6.a.vi. Repealed

D. - D.3. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 17:6, 17:7, 17:24.4, 17:183.2, and 17:395.

HISTORICAL NOTE: Promulgated by the Board of Elementary and Secondary Education, LR 31:1291 (June 2005), amended LR 31:2211 (September 2005), LR 31:3070 (December 2005), LR 31:3072 (December 2005), LR 32:1414 (August 2006), LR 33:429 (March 2007), LR 33:432 (March 2007), LR 33:2050 (October 2007), LR 33:2354 (November 2007), LR 33:2601 (December 2007), LR 34:1607 (August 2008), LR 36:1486 (July 2010), LR 37:547 (February 2011), LR 37:1128 (April 2011), LR 37:2129 (July 2011), LR 37:2132 (July 2011), LR 37:3193 (November 2011), LR 38:754, 761 (March 2012), LR 38:1001 (April 2012), LR 38:1584 (July 2012), LR 40:994 (May 2014), LR 40:1328 (July 2014), LR 40:1679 (September 2014), LR 40:2525 (December 2014), LR 41:915 (May 2015), LR 41:1482 (August 2015), LR 41:2126 (October 2015), LR 42:232 (February 2016), LR 42:1062 (July 2016), LR 42:1878 (November 2016), LR 42:2176 (December 2016), LR 43:1287 (July 2017), LR 43:2132 (November 2017), LR 43:2483 (December 2017), LR 44:263 (February 2018), LR 44:1868 (October 2018), repromulgated LR 44:1998 (November 2018), amended LR 45:1454 (October 2019), LR 46:556 (April 2020), LR 47:860 (July 2021), amended LR 48:33 (January 2022), LR 48:39 (January 2022), repromulgated LR 48:1092 (April 2022), LR 48:2098 (August 2022), LR 48:2560 (October 2022), LR 49:

§2319. The Career Diploma

A. - A.2. ...

B. Assessment Requirements

1. - 1.c. Repealed

B.2. - C.4. ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 17:6, 17:7, 17:24.4, 17:183.2, 17:183.3, 17:274, 17:274.1, and 17:395.

HISTORICAL NOTE: Promulgated by the Board of Elementary and Secondary Education, LR 31:1291 (June 2005), amended LR 31:2211 (September 2005), LR 31:3070 (December 2005), LR 31:3072 (December 2005), LR 32:1414 (August 2006), LR 33:429 (March 2007), LR 33:432 (March 2007), LR 33:2050 (October 2007), LR 33:2354 (November 2007), LR 33:2601 (December 2007), LR 34:1607 (August 2008), LR 35:1230 (July 2009), LR 35:1876 (September 2009), LR 35:2321 (November 2009), LR 35:2750 (December 2009), LR 36:1490 (July 2010), LR 37:548 (February 2011), LR 37:1130 (April 2011), LR 37:2130 (July 2011), LR 37:3197 (November 2011), LR 38:761 (March 2012), LR 38:1005 (April 2012), LR 40:2522 (December 2014), LR 41:1482 (August 2015), LR 41:2594 (December 2015), LR 42:232 (February 2016), LR 43:1287 (July 2017), LR 43:2132 (November 2017), LR 43:2484 (December 2017), LR 44:1868 (October 2018), LR 45:1747 (December 2019), LR 46:557 (April 2020), LR 46:1086 (August 2020), LR 47:860 (July 2021), LR 48:39 (January 2022), repromulgated LR 48:1093 (April 2022), LR 48:2560 (October 2022), LR 49:

Subchapter B. Academic Programs of Study

§2345. Foreign Languages

A. The foreign language course offerings shall be as follows.

Course Title(s)	Units
***	
Cambridge AICE—AS (Honors): Japanese	1
AP Computer Science A	1
Computer Science	1
Computer Coding as a Foreign Language I, II	1 each
Indigenous Languages I, II	1 each

B. - B.6. ...

C. AP Computer Science A shall be used as either an elective, math, or foreign language credit.

D. Computer Coding as a Foreign Language shall be aligned to a coding language approved by the Louisiana Workforce Commission to the industry based certification state focus list.

1. The instructor shall be certified in computer science.

2. Students shall take the industry based certification aligned to the course in order to receive credit for the courses. This can be taken during either the first course or second course.

3. The school system shall report the pass or fail course status of the student for the industry based certification to the LDE.

AUTHORITY NOTE: Promulgated in accordance with R.S. 17:7, R.S. 17:24.4, R.S. 273, and R.S. 17:284.

HISTORICAL NOTE: Promulgated by the Board of Elementary and Secondary Education, LR 31:1295 (June 2005), amended LR 36:1996 (September 2010), LR 38:759 (March 2012), LR 38:2364 (September 2012), LR 39:2220 (August 2013), LR 40:998 (May 2014), LR 40:2527 (December 2014), LR 43:2133 (November 2017), LR 43:2484 (December 2017), LR 45:1455 (October 2019), LR 49:

§2353. Mathematics

A. The mathematics course offerings for the college diploma shall be as follows.

Mathematics Courses—College Diploma	
Course Title(s)	Units
* * *	

1. AP Computer Science A shall be used as either an elective, math, or foreign language credit.

B. - C. ...

* * *

AUTHORITY NOTE: Promulgated in accordance with R.S. 17:6, 17:7 and 17:24.4

HISTORICAL NOTE: Promulgated by the Board of Elementary and Secondary Education, LR 31:1296 (June 2005), amended LR 33:2605 (December 2007), LR 34:1609 (August 2008), LR 35:2322 (November 2009), LR 36:1493 (July 2010), LR 38:760 (March 2012), LR 40:999 (May 2014), LR 40:2527 (December 2014), LR 42:1063 (July 2016), LR 43:2134 (November 2017), LR 44:1868 (October 2018), LR 49:

Family Impact Statement

In accordance with section 953 and 974 of title 49 of the Louisiana Revised Statutes, there is hereby submitted a Family Impact Statement on rules proposed for adoption, repeal, or amendment. All Family Impact Statements will be kept on file in the state board office which has adopted, amended, or repealed rules in accordance with the applicable provisions of the law relating to public records.

1. Will the proposed Rule affect the stability of the family? No.
2. Will the proposed Rule affect the authority and rights of parents regarding the education and supervision of their children? No.
3. Will the proposed Rule affect the functioning of the family? No.
4. Will the proposed Rule affect family earnings and family budget? No.
5. Will the proposed Rule affect the behavior and personal responsibility of children? No.
6. Is the family or a local government able to perform the function as contained in the proposed Rule? Yes.

Poverty Impact Statement

In accordance with section 973 of title 49 of the Louisiana Revised Statutes, there is hereby submitted a Poverty Impact Statement on rules proposed for adoption, amendment, or repeal. All Poverty Impact Statements will be in writing and kept on file in the state agency which has adopted, amended, or repealed rules in accordance with the applicable provisions of the law relating to public records. For the purposes of this section, the word "poverty" means living at or below 100 percent of the federal poverty line.

1. Will the proposed Rule affect the household income, assets, and financial authority? No.
2. Will the proposed Rule affect early childhood development and preschool through postsecondary education development? No.
3. Will the proposed Rule affect employment and workforce development? No.
4. Will the proposed Rule affect taxes and tax credits? No.
5. Will the proposed Rule affect child and dependent care, housing, health care, nutrition, transportation, and utilities assistance? No.

Small Business Analysis

The impact of the proposed Rule on small businesses as defined in the Regulatory Flexibility Act has been considered. It is estimated that the proposed action is not expected to have a significant adverse impact on small businesses. The agency, consistent with health, safety, environmental and economic welfare factors has considered and, where possible, utilized regulatory methods in the drafting of the proposed rule that will accomplish the objectives of applicable statutes while minimizing the adverse impact of the proposed rule on small businesses.

Provider Impact Statement

The proposed Rule should not have any known or foreseeable impact on providers as defined by HCR 170 of the 2014 Regular Legislative Session. In particular, there should be no known or foreseeable effect on:

1. the effect on the staffing level requirements or qualifications required to provide the same level of service;
2. the total direct and indirect effect on the cost to the providers to provide the same level of service; or
3. the overall effect on the ability of the provider to provide the same level of service.

Public Comments

Interested persons may submit written comments via the U.S. Mail until noon, February 9, 2023, to Shan N. Davis, Executive Director, Board of Elementary and Secondary Education, Box 94064, Capitol Station, Baton Rouge, LA 70804-9064. Written comments may also be hand delivered to Shan Davis, Executive Director, Board of Elementary and Secondary Education, Suite 5-190, 1201 North Third Street, Baton Rouge, LA 70802 and must be date stamped by the BESE office on the date received. Public comments must be dated and include the original signature of the person submitting the comments.

Shan N. Davis
Executive Director

FISCAL AND ECONOMIC IMPACT STATEMENT FOR ADMINISTRATIVE RULES
RULE TITLE: Foreign Languages

I. ESTIMATED IMPLEMENTATION COSTS (SAVINGS) TO STATE OR LOCAL GOVERNMENT UNITS (Summary)

No implementation costs are anticipated as a result of this measure. The proposed rule revisions classify computer science and indigenous languages as foreign languages to align the TOPS University Diploma requirements with the Taylor Opportunity Program for Students (TOPS) core curriculum pursuant to Act 502 of the 2022 Regular Legislative Session and provide for considerations related to course credit.

II. ESTIMATED EFFECT ON REVENUE COLLECTIONS OF STATE OR LOCAL GOVERNMENTAL UNITS (Summary)

The proposed rule revisions will not have an effect on revenue collections of state or local governmental units.

III. ESTIMATED COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS, SMALL BUSINESSES, OR NONGOVERNMENTAL GROUPS (Summary)

The proposed rule revisions will not result in costs and/or benefits to directly affected persons, small businesses, or non-governmental groups. Many schools offer computer science classes already, and several schools are capable of offering courses in indigenous languages. Educators wishing to purse certification in computer science may incur additional costs of coursework and certification add-on endorsement fees of $25; however, the extent to which educators not already certified to teach these courses will choose to pursue certification is indeterminable.

IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)

The proposed rule revisions will not have an effect on competition and employment.

Beth Scioneaux
Deputy Superintendent
2301#071

Alan M. Boxberger
Interim Legislative Fiscal Office
Legislative Fiscal Office

Attachment 2

RECEIVED
FEB 10 2023
Board of Elementary and Secondary Education

LSU
Center for Computation & Technology

LSU
Department of Physics & Astronomy

February 9, 2023

Comment on the *Notice of Intent* on revisions of Bulletin 741 to classify computer science as a foreign language

Expertise: I am appointed by Governor John Bel Edwards as a member of the *Computer Science Education Advisory Commission.* I have 25 years of academic experience after completing my Ph.D. in Physics. My expertise is in computational science and computing education. I have published 97 peer reviewed publications in both areas, and advised 13 Ph.D. students. I have been the Principal or Co-Principal Investigator in 26 federally-funded research projects for a total of over $33M.

Comment

The *Notice of Intent* states "The aforementioned revisions classify computer science and indigenous languages as foreign languages to align the TOPS University Diploma requirements with the Taylor Opportunity Program for Students (TOPS) core curriculum pursuant to Act 502 of the 2022 Regular Legislative Session and provide for considerations related to course credit."

I would like to make the following comments about the *Notice of Intent*:

1. This revision does not align with Act 502, where Computer Science is listed independently of Foreign Language (first page):
   "To be eligible ... a student ... shall have successfully completed a core curriculum ...as follows: (5) Foreign Language **or** Computer Science - two units"
   Act 502 lets Computer Science be used as an alternative discipline to Foreign Languages for TOPS graduation requirements, but unequivocally keeps Computer Science and Foreign Languages as separate disciplines.
2. Bulletin 741–Subchapter B. Academic Programs of Study already listed *Computer/ Technology Education* as a program of study. To fulfill the requirements of Act 502, this program needs to be split into two programs: Computer Science, and Technology Education.
3. Act 541–The Computer Science Education Act established the Computer Science Education Advisory Commission "to provide recommendations to the State Board of Elementary and Secondary Education through the state Department of Education for the development and implementation of a state action plan for the delivery of educa-

tion in computer science in all public schools." (bottom of page 2 and top of page 3)
The Commission is charged to address "Any computer science requirements for high school graduation, postsecondary entrance, and eligibility for the Taylor Opportunity Program for Students." (bottom of page 5 and top of page 6).

Therefore, Act 541 sets a clear expectation for the Computer Science Education Advisory Commission to make recommendations prior to revisions of Bulletin 741 that include Computer Science in the TOPS core curriculum.

I would also like to make the following comments in relation with what are considered best practices in computing education. I am attaching the brief Code.org prepared in January 30, 2014 on this topic. See the release blog here: `https://blog.code.org/post/75129943201/language`.

1. In 2014 Code.org took a stance against Computer Science as a foreign language, stating that efforts "allowing computer science courses to count as a foreign language credit will undermine the ability of students to have access to this critical field."
2. The brief states "...coding is fundamentally different from spoken and written world languages." And, further down "Ideally, computer science should be considered as its own subject within the K-12 system; however, these courses have generally been aligned with mathematics, science, or business. This has already confused administrators, educators, and decision-makers about how to treat computer science, and allowing it to satisfy a foreign language credit would add to this confusion."
3. Code.org also advocates "for the expansion of computer science education, not just coding. In a computer science class, a student learns how the Internet works and methods to analyze big data sets, as well as the societal implications of computing and computers – all topics important to any field, even if the student does not write a line of code. Coding is the tool that students use to implement computer science and create software, and is fundamental to rigorous computer science. The combination of learning the concepts of computer science, then applying the skills through coding, is what empowers students."
4. In agreement with Code.org policy recommendations, Act 502 states that the "the two [Computer Science] units shall be in principles, coding, and programming".
5. Finally, let me mention that Act 541 also includes arguments similar to the ones made by Code.org. In page 1, it says "Knowledge of computer science and the use of technology is essential for all individuals, not just those working or planning to work in the technology sector". And, page 2 says "It is in the public interest that a comprehensive computer science education initiative be undertaken...' In conclusion, computing education needs to go beyond just the learning of a programming language.

In summary, I believe the approval of Acts 502 and 541 was an important step forward to promote adoption of computer science in all Louisiana schools in the spirit of other state and national computer science initiatives. The Board of Elementary and Secondary Education and the Louisiana Department of Education needs to ensure that modifications to Bulletin 741:

1. Keep Computer Science and Foreign Languages as separate disciplines, in accordance with Act 502.
2. Are effected only after recommendations from the Computer Science Education Advisory Commission are issued, in accordance with Act 541.
3. Benefit all Louisiana students, whether or not they plan to pursue a career in the sector, in accordance whit the spirit of a TOPS graduation requirement.
4. Include Computer Science courses that cover fundamental principles besides coding, such as cybersecurity, artificial intelligence, computational science, robotics and data science, to name a few.

Please feel free to contact me if you need any clarification of my comments.

Sincerely,

Juana Moreno,
Patricia Hewlett Bodin Distinguished Professor,
Dept. of Physics & Astronomy and
Center for Computation & Technology,
Louisiana State University, Baton Rouge, LA 70803,
Phone: 225-578-7586, email: moreno@lsu.edu

Issue Brief:

Computer Science as a Foreign Language Credit

Background and recommendation

As part of a national movement to put computer science into the core of our education system, proposals have surfaced to allow computer science or a coding course to count as a foreign language graduation requirement. Along with a diverse group of states and partners, Code.org and Computing in the Core support a policy of allowing computer science to count as a *mathematics or science graduation requirement*. We appreciate efforts to expand and promote computer science, but we are strongly concerned that allowing computer science courses to count as a foreign language credit will undermine the ability of students to have access to this critical field.

Alignment with mathematics and science

Computer science is its own academic discipline, but in reality, computer science is more closely aligned with mathematics than any other academic subject. Computer science curriculum contains parts of both mathematics and science (computation and theory) and engineering components (design within constraints). Computer science fits well within these disciplines and specifically strengthens math concepts like geometry, functions, and variables, as well as science concepts such as experimentation and modeling/simulation. Additionally, computer science strengthens students' knowledge and skill in problem-solving and critical thinking.

Misalignment with foreign language

Although we use the term "programming language" to refer to C++, Java, Python, and so on, coding is fundamentally different from spoken and written world languages. French, Japanese, and Spanish, etc., are natural languages, while programming languages are constructed languages created for the purpose of using a computer to build and run software. Spanish has a vocabulary of 10,000 words, and a very consistent grammatical and sentence structure. In contrast, a typical computing language has a vocabulary of about 100 words, and the real work is in how to put these words together to build a program of unlimited complexity. Both are "languages," but the learning involved is very different.

Departmental and teacher certification problems

Ideally, computer science should be considered as its own subject within the K-12 system; however, these courses have generally been aligned with mathematics, science, or business. This has already confused administrators, educators, and decision-makers about how to treat computer science, and allowing it to satisfy a foreign language credit would add to this confusion. Additionally, in many states, teacher certification pathways for computer science will

go awry if courses are shifted into foreign language departments. The idea that foreign language teachers will end up instructing students in computer science may seem unlikely, yet departmental and teacher credentialing conflicts have arisen in districts that allow computer programming to count as a foreign language.

College and university admissions requirements

If computer science is counted as a foreign language credit toward high school graduation, students who take it as a replacement for a spoken language may fail to be accepted into colleges and universities that require traditional spoken foreign language credits as entrance requirements.

Computer science is more than coding

We are advocating for the expansion of *computer science* education, not just coding. In a computer science class, a student learns how the Internet works and methods to analyze big data sets, as well as the societal implications of computing and computers -- all topics important to any field, even if the student does not write a line of code. *Coding* is the tool that students use to implement computer science and create software, and is fundamental to rigorous computer science. The combination of learning the concepts of computer science, then applying the skills through coding, is what empowers students.

Widespread support for computer science as a mathematics or science credit

27 states and Washington, DC have adopted policies allowing AP or rigorous computer science to count toward a mathematics or science credit. And at least five states are already moving to adopt this policy. Code.org along with Microsoft, Amazon, Google, Facebook, the College Board, the Computer Science Teachers Association and numerous other organizations support a policy allowing computer science to count toward mathematics or science graduation requirements.

Attachment 3

Code.org
1501 4th Avenue
Suite 900
Seattle, WA 98101
http://code.org

Attachment 3

February 10, 2023

Louisiana Department of Education
1201 North Third Street
Baton Rouge, LA 70802-5243

Re: Computer Science Meeting a Foreign Language Graduation Requirement

Superintendent of Education Cade Brumley,

Let me first thank you for your department's and Louisiana's continued commitment to furthering computer science education in your great state.

It has come to my attention that a Code.org position paper written several years ago has been the basis of inquiries into and statements about Louisiana's Computer Science as a Foreign Language graduation requirement legislation and policy. While the premise and basic information of our brief stands as our overarching policy suggestions, Code.org does not take an opposing position on states adopting computer science as a foreign language credit using different implementation methods outside our suggestions, when it is adopted strategically and purposefully.

To this end, Code.org does not oppose, or have a public stance on, Louisiana Department of Education's position on, or implementation of, computer science as a foreign language graduation credit requirement.

Please reach out to me if I can be of further assistance on this matter

Sincerely,

Anthony Owen; J.D.
Senior Director of State Government Affairs
President of the National CS Advocacy Coalition
Anthony.Owen@Code.org

Attachment 4

Gordon A. Cain Center
for STEM Literacy

March 6, 2023

Louisiana Department of Education
1201 North Third Street
Baton Rouge, LA 70802-5243

Re: Computer Science Meeting a Foreign Language Graduation Requirement

Superintendent of Education Cade Brumley,

The LSU Gordon A Cain Center for STEM Literacy and its Capital Area STEM Network Center are committed to expanding computer science education in Louisiana. Like our national partner, Code.org, we do not have a public stance on Louisiana Department of Education's position on, or implementation of, computer science as a foreign language graduation credit requirement.

While it is evident that computer science is more than coding and that the classification of computer science as a foreign language is controversial, it is also evident that the proposed legislation and policy would constitute a long overdue first step to increase access to computer science education for Louisiana students.

It is for this reason that the LSU Gordon A Cain Center for STEM Literacy is committed to our continued collaboration with the state and Code.org in furthering computer science education in Louisiana.

Sincerely,

Frank Neubrander
Demarcus D. Smith Alumni Professor of Mathematics
Executive Director and Chair, Gordon A. Cain Center for STEM Literacy

Frank Neubrander, Execcutive Director and Chair, Gordon A. Cain Center for STEM Literacy
neubrand@math.lsu.edu – (225) 772 7252 (text/cell)