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# Computer Science Education Advisory Commission Meeting

August 3, 2022

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# Call to Order





# Roll Call



# Agenda



# Agenda

- I. Call to order
- II. Roll call
- III. Introductions
- IV. Consideration of Computer Science Education Advisory Commission Purpose
- V. Consideration of a Status Report on Computer Science Education in Louisiana
- VI. Consideration of Goals and Timelines
- VII. Election of Chair & Vice-Chair
- VIII. Adjournment

# Welcome

## Introductions

Please tell us:

- your **name**;
- the **group** you represent; and
- one sentence that describes **your connection** to Computer Science Education.



# Computer Science Education Advisory Commission Purpose



# Computer Science (CS) Education Advisory Commission

[Louisiana Act 541](#) (2022), the Computer Science Education Act, establishes the Computer Science Education Advisory Commission to **provide recommendations** to the State Board of Elementary and Secondary Education through the Department of Education for the **development and implementation of a state action plan** for the delivery of education in computer science in all public schools.





# CS Education Advisory Commission Purpose

Create a comprehensive statewide computer science education program that benefits all citizens, flows seamlessly between all levels of education, and meets the needs of a dynamic and competitive economy.

# CS Education Advisory Commission Members

The advisory commission is composed of members appointed by each of the following authorities

Governor	Board of Regents	Louisiana Workforce Commission
President of the Senate	Southern University System	University of Louisiana System
Speaker of the House	Louisiana Community and Technical College System	Computer Science Teachers Association, LA Chapter (3)
Department of Education	Louisiana State University	LA Association of School Superintendents
Louisiana Economic Development	Board of Elementary and Secondary Education	LA Association of Public Charter Schools
Commissioner of Higher Education (2)	Louisiana Office of Student and Financial Assistance	Louisiana Association of Independent Colleges and Universities
Senate Committee on Education	House Committee on Education	LA School Boards Association



# Louisiana Department of Education Overview



# Louisiana Believes



Children are our highest priority



Equity matters



Families are our partners



Choice expands opportunities



Educators are valued professionals



Schools are invaluable to communities



Graduates must be ready



Our future is bright

# Louisiana's Goals and Priorities

## SIX CRITICAL GOALS

Students enter kindergarten ready.

Students will achieve mastery on third-grade assessments and enter fourth grade prepared for grade-level content.

Students will achieve mastery on eighth-grade assessments and enter ninth grade prepared for grade-level content.

Students will graduate on time.

Students will graduate with a college and/or career credential.

Students will graduate eligible for a TOPS award.

## EDUCATIONAL PRIORITIES

Ensure every student is on track to a professional career, college degree, or service.

Remove barriers and create equitable, inclusive learning experiences for all children.

Provide the highest quality teaching and learning environment.

Develop and retain a diverse, highly effective educator workforce.

Cultivate high-impact systems, structures, and partnerships

# LDOE Organizational Structure



# Our Academic Strategy



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## **ENSURE COHERENCE AND QUALITY:**

Components are interconnected and of the highest quality.

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## **BUILD TRUST IN THE FIELD:**

Build trust through ongoing support, collaboration and communications structures for school systems, principals and teachers.

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## **FACILITATE STRATEGIC PARTNERSHIPS:**

Facilitate partnerships between school systems and education partners to ensure teachers and students have access to instructional materials and professional development.

# Overview of the Current Status of Computer Science Education in Louisiana







# Computer Science Education Act Legislative Findings



# Legislative Findings

Computer Science (CS) literacy is essential for all students and is in the public interest.

- CS-related positions make up one of the fastest-growing, highest-paying, and largest sectors in every industry, in every state.
- Louisiana's fastest growing industry is within Professional, Scientific, and Technical Services (much of the tech industry).
- Our students will be using computer science at work, regardless of their future career. An estimated 7.7 million Americans use computers in complex ways in their jobs, half of which are not directly related to STEM (*Change the Equation*, 2015).

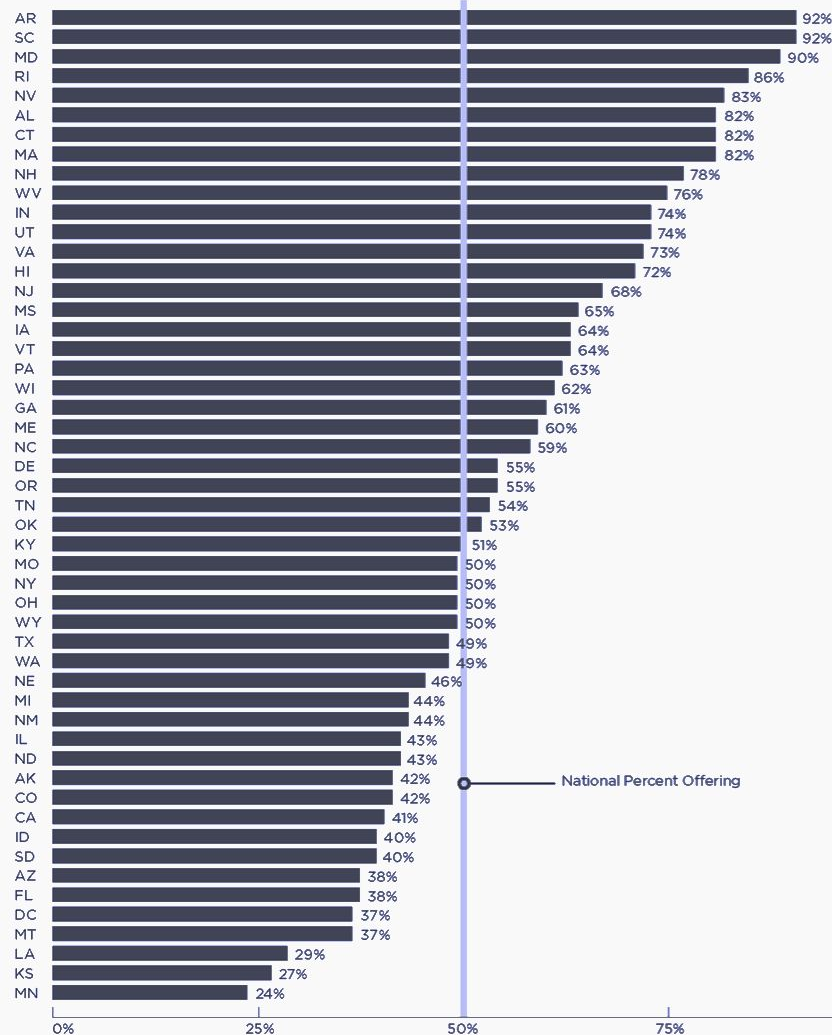


# Status Report on Computer Science



# U.S. Schools Offering Computer Science

Percent of Public High Schools



# Access to Computer Science Courses in Louisiana



High school students  
attend a school that  
offers CS



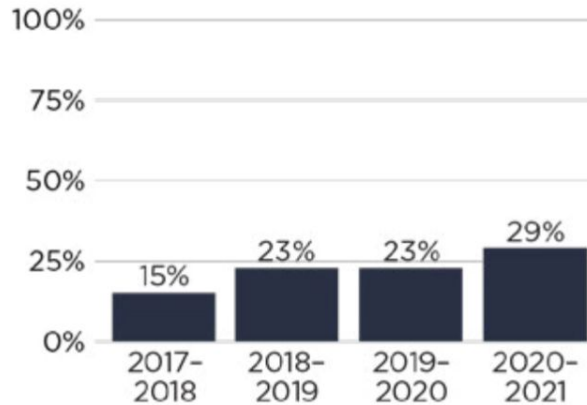
High school students  
enrolled in a foundational  
CS Course



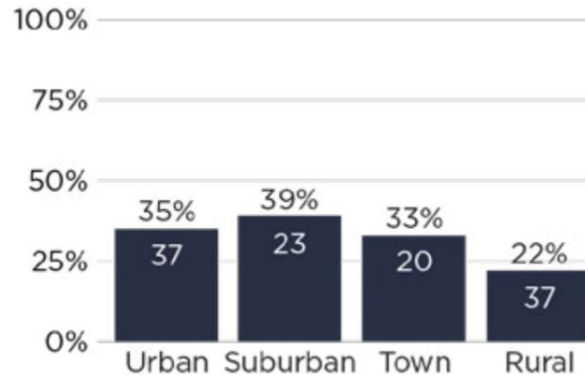
Students enrolled in CS  
that are female

# Percentage of Louisiana Public High Schools Offering Foundational Computer Science

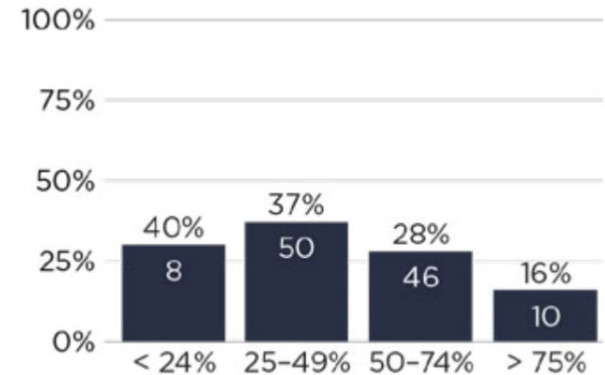
Access by School Year



Access by Geography



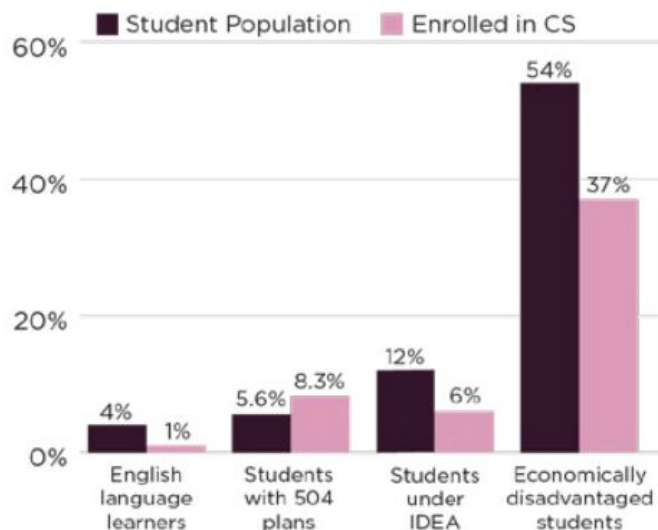
Access by % FRL in the School



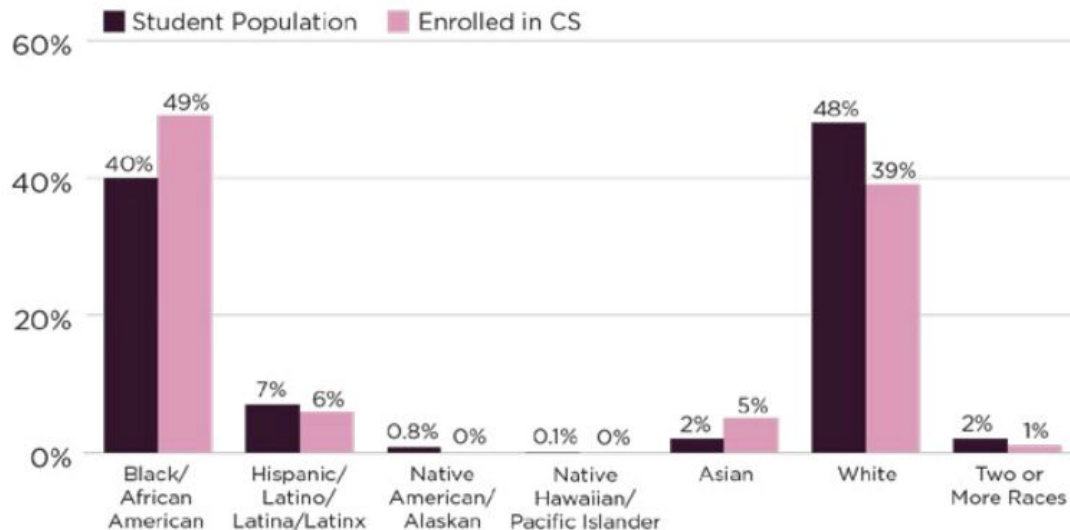
from code.org 2021 State of Computer Science Education Report

## Participation in Foundational High School Computer Science Courses by Demographic

### CS Enrollment by Subgroup

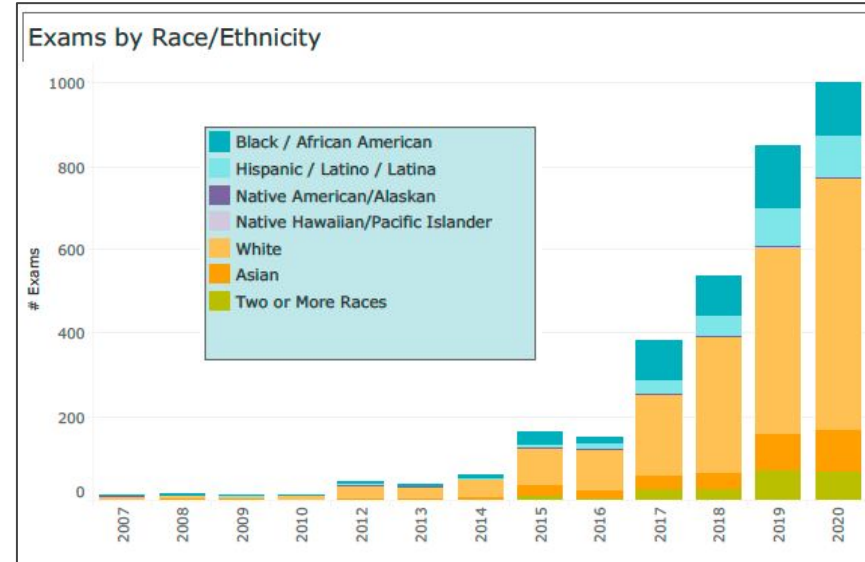
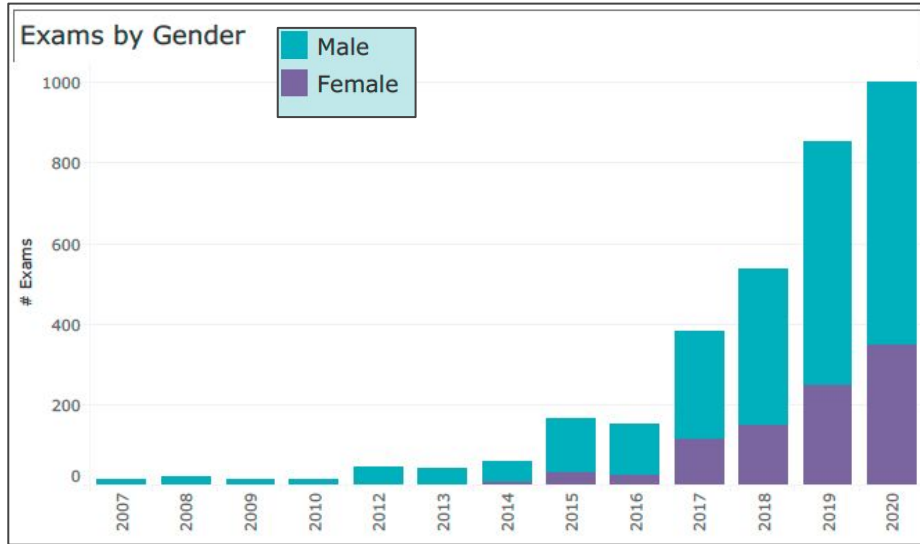


### CS Enrollment by Race/Ethnicity



from code.org 2021 State of Computer Science Education Report

# Louisiana Advanced Placement (AP) CS Exams Taken Over Time



Overall 9-12 Student Demographics (2019-2020) <i>based on state filter above</i>		Percentage Students Taking AP CS Exam (2020)
% Black / African American	38.10%	12.60%
% Hispanic / Latino / Latina	5.24%	9.70%
% Native American/Alaskan	0.70%	0.40%
% Native Hawaiian / Pacific Isl..	0.07%	0.30%
% Asian	1.86%	9.90%
% White	51.40%	60.10%
% Two or More Races	1.77%	7.00%

from code.org



# Computer Science in Louisiana

**5,918**

computing jobs open in  
Louisiana each month

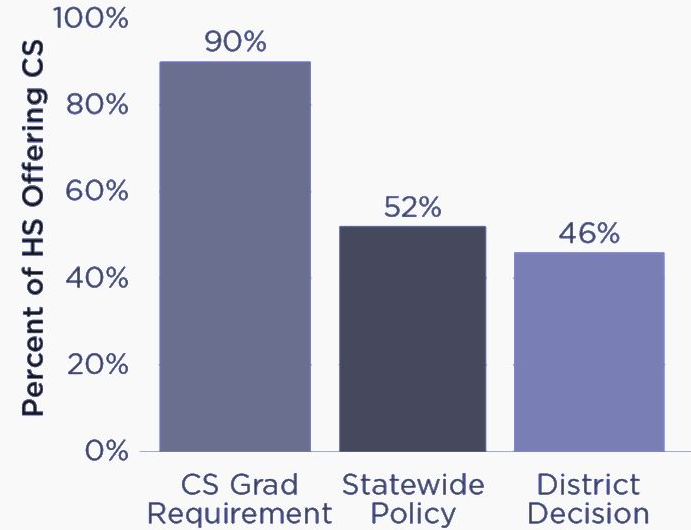
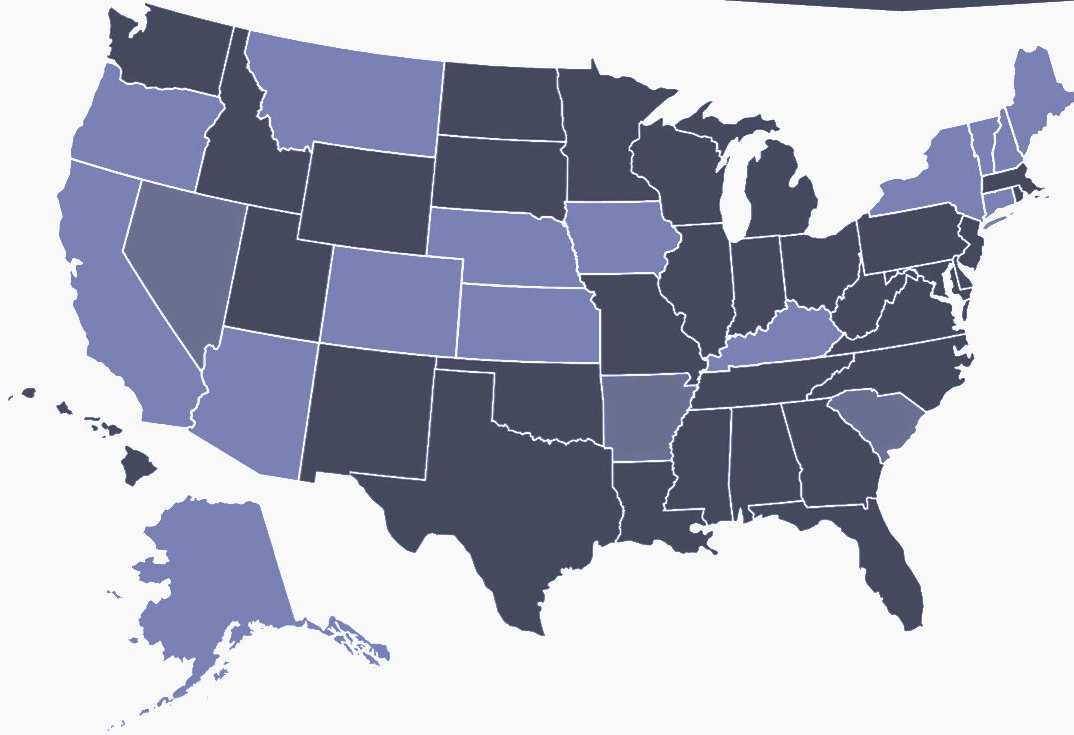
**\$71,016**

average salary  
of these jobs

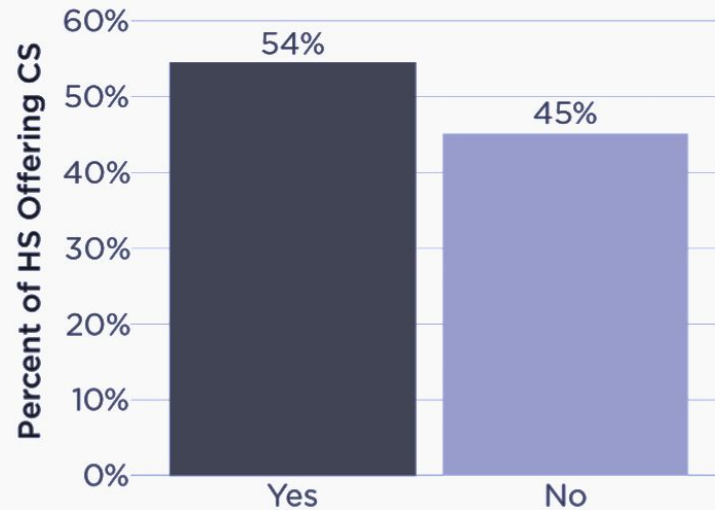
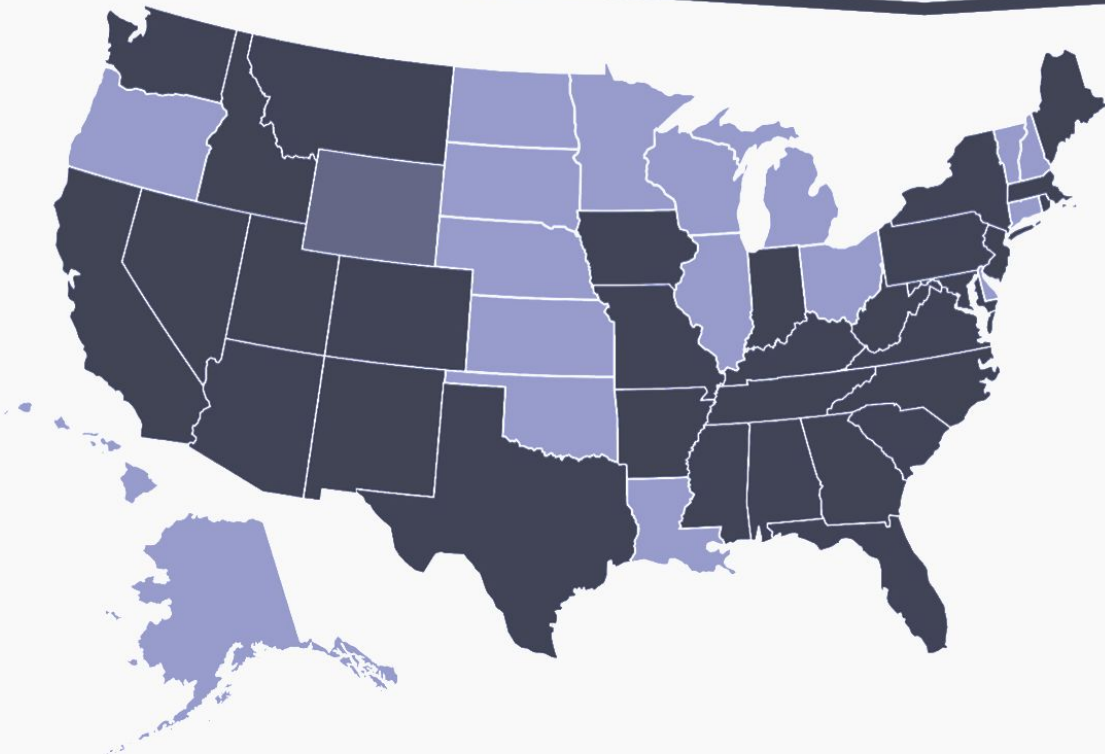
Yet, there were only 568 college graduates in CS in Louisiana in 2019, and 29% of public high schools teaching a foundational CS course.

from <https://code.org/advocacy/state-facts/LA.pdf>

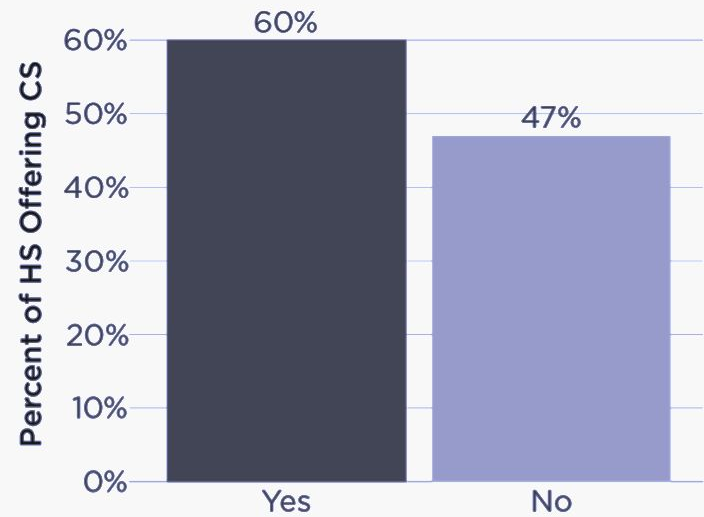
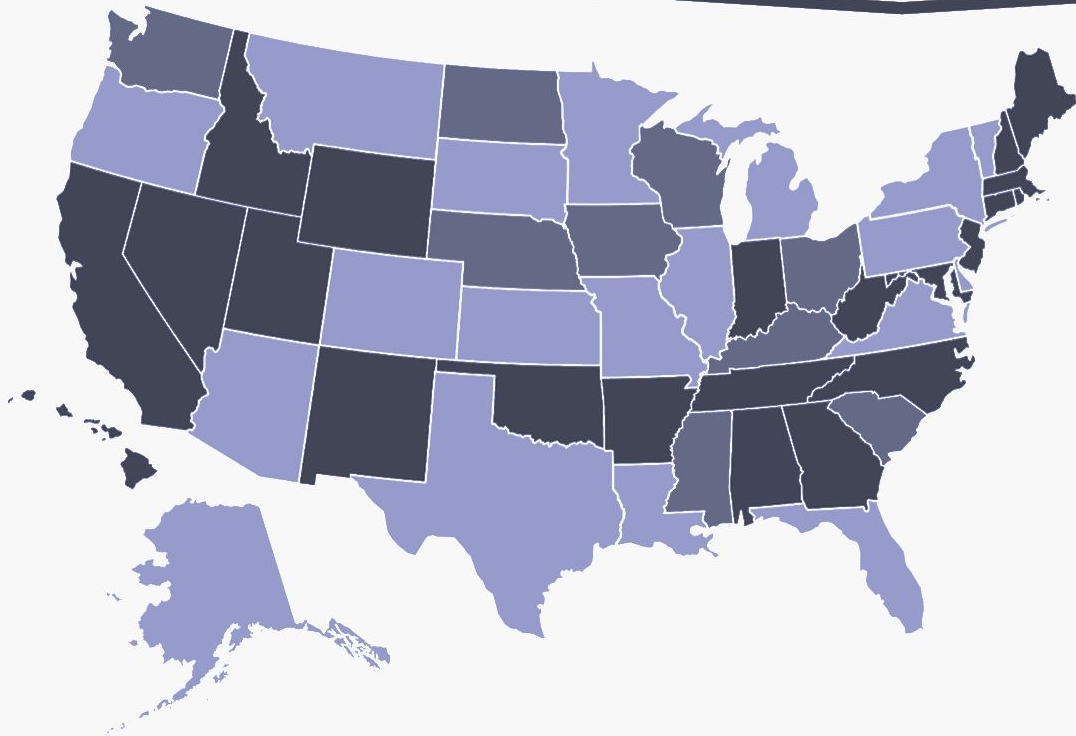
# Computer Science Can Satisfy a Core High School Graduation Requirement



# Dedicated Funding for K-12 Computer Science



# State Plan for K-12 Computer Science





# Working Groups

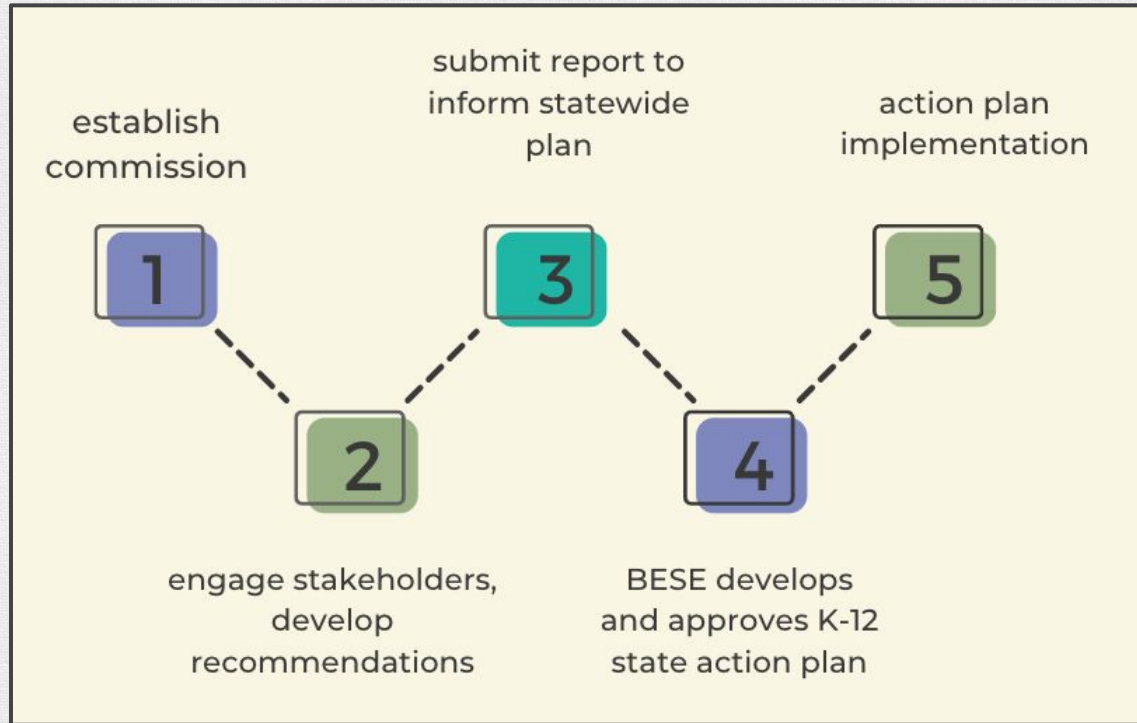


# Working Groups

During today's meeting, we will use a working group structure to begin our examination of the opportunities, gaps, and assets that will inform our recommendations.

This structure will allow members to generate focus questions that must be explored in order to inform the development of recommendations. Based on these focus questions from the commission, LDOE will present research, plans, and more information in each category at subsequent meetings in order to formulate recommendations.

# CS Education Advisory Commission Roadmap



# Key Stakeholder Groups

As called for by Act 541, the commission shall work with

<b>K-12 teachers and leaders</b>	to identify gaps between CS education services currently provided and those needed in both the near- and long-term and possible reasons for such gaps
<b>Teacher Education faculty and current CS teachers</b>	to identify appropriate CS teacher competencies and methods for development, to identify methods to recruit and retain CS teachers, and to determine whether there is a need to create professional learning programs to assist teachers in developing CS education competences
<b>business leaders and postsecondary institutions</b>	to identify CS workforce needs and the skills postsecondary students need to successfully navigate postsecondary CS programs



# Guidance for Our Approach to Computer Science

According to Act 541, approaches to a statewide strategy for CS should

- utilize an integrated approach across content areas;
- be comprehensive from kindergarten through high school;
- flow seamlessly into postsecondary career and education pathways;
- increase the number of teachers prepared to effectively teach CS; and
- expand CS coursework opportunities to all schools statewide.

# Report to Inform Statewide K-12 CS Plan

The report submitted to BESE by December 2023 shall provide recommendations addressing the following items:

1. K-12 state content standards for Computer Science
2. coordination of CS education among K-12, postsecondary institutions, and workforce
3. CS requirements for high school graduation, postsecondary entrance, and TOPS
4. comprehensive teacher training (including certification and preservice)
5. technical assistance grants to schools
6. funding strategies for teacher training and program expansion

# Working Groups

## K-12 Learning Framework

- ✓ K-12 CS progression of learning, standards, and integration across content areas
- ✓ school/system implementation

## High-quality Teacher Preparation and Professional Learning

- ✓ preservice teacher preparation and certification
- ✓ inservice teacher professional learning
- ✓ recruitment, retention

## High School and Postsecondary Alignment

- ✓ specialized courses and pathways
- ✓ CS graduation, TOPS & postsecondary requirements
- ✓ postsecondary, business, and workforce alignment

*all working groups will consider **funding strategies** for teacher training, program expansion, and **technical assistance grants** to schools*

# Working Groups

# Goals and Timelines

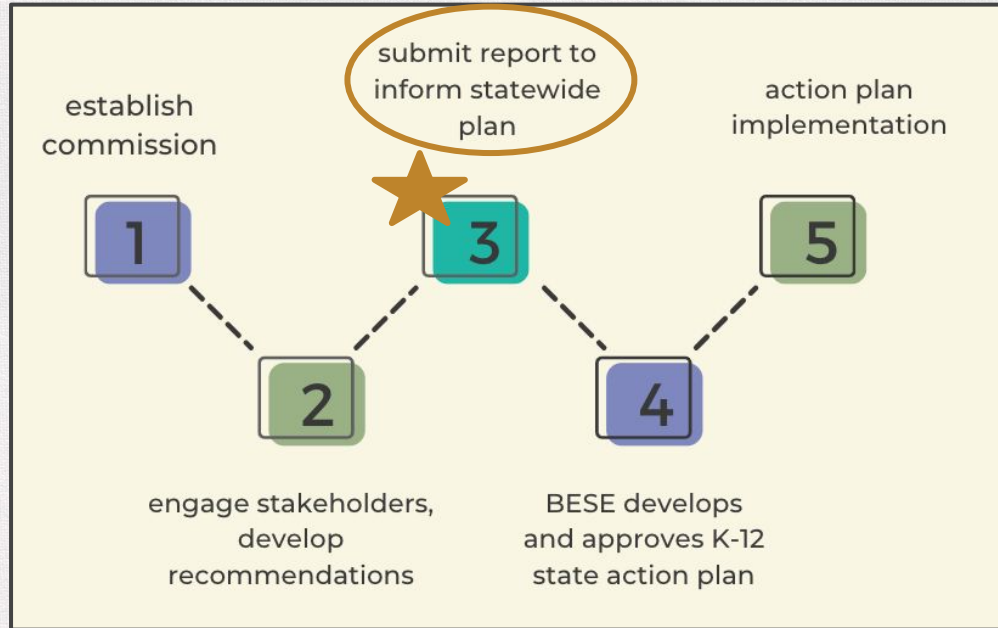


# CS Education Advisory Commission Purpose

Create a comprehensive statewide computer science education program that benefits all citizens, flows seamlessly between all levels of education, and meets the needs of a dynamic and competitive economy.

# CS Education Advisory Commission Goal

By **December 2023**, provide a report to the State Board of Elementary and Secondary Education on recommendations to be addressed in a statewide plan for K-12 computer science.



# Proposed Timeline

July-Sept. 2022	Oct.-Dec. 2022	Jan.-Mar. 2023	April-June 2023	July-Sept 2023	Oct.-Dec. 2023	
Meeting 1	Meeting 2	Meeting 3	Meeting 4	Meeting 5	Meeting 6	
research		analyze findings				
	draft recommendations			finalize report	report to BESE	
stakeholder engagement						



# Proposed Meeting Schedule

Date and Time	Meeting and Location
August 3 1:30 p.m.	Meeting 1 Claiborne Building, Baton Rouge
October 27 1:30 p.m.	Meeting 2 Baton Rouge TBD
February 8, 2023 1:30 p.m.	Meeting 3 Claiborne Building, Baton Rouge
May 3, 2023 1:30 p.m.	Meeting 4 Claiborne Building, Baton Rouge
August 2, 2023 1:30 p.m.	Meeting 5 Claiborne Building, Baton Rouge
October 4, 2023 1:30 p.m.	Meeting 6 (Finalize report draft for BESE) Claiborne Building, Baton Rouge
December 13, 2023 TBD	December BESE Meeting Claiborne Building, Baton Rouge

# Election of Chair and Vice Chair



# Adjournment



# Next Steps

- Next meeting:
  - October 27 in Baton Rouge
- Upcoming topics:
  - CS Stakeholder Engagement and Research Findings Presentations

Email [sharon.necaise@la.gov](mailto:sharon.necaise@la.gov) with questions.

