



# Computer Science Working Group Report - Status

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# Ten Minnesota Commitments to Equity

1. **Prioritize equity.**
2. Start from within.
3. Measure what matters.
4. Go local.
5. Follow the money.
6. Start early.
7. Monitor implementation of standards.
8. Value people.
9. **Improve conditions for learning.**
10. Give students options.



# Today's Agenda

- Timeline
- Recommendations in Working Group's Draft for Public Comment
  - MDE is presenting these recommendations on behalf of the Working Group
- Next Steps

# Working Group Timeline

- HF 2497 passed in May
- Application Open July 17-August 25
- Committee Announced mid-September
- First Meeting mid-October
- Public Review and Comment February 1-16

# Working Group Draft Recommendations Categories

- Data Reporting
- Capacity Building and Licensure
- High-Quality Professional Development
- Standards and Credit Equivalency

# Working Group Recommendations: Data Reporting (1)

1. The Minnesota Department of Education and Computer Science Advisory Committee will develop a data collection plan for school districts to get an accurate count of access, participation and success in computer science education across grades K–12. This data should:
  - a. Be able to be displayed in a user-friendly, actionable way using a data dashboard
  - b. Be utilized to update the legislature on key success metrics of the computer science working plan
  - c. Include wider categories for students' gender and race/ethnicity identities

# Working Group Recommendations: Data Reporting (2)

2. The Minnesota Department of Education and Computer Science Advisory Committee will define key performance indicators and success measures of computer science education in Minnesota. Some examples could include:

- a. Number of schools offering courses—breakdown by type of course, K–5, 5–8 and 9–12
- b. Participation by key student demographics
- c. Student success data
- d. Number of qualified teachers

3. The State of Minnesota legislature will recognize the unique challenges our rural and certain urban districts face in rolling out computer science education from an infrastructure access perspective and provide funding and resources for access to broadband and computers.

# MN COMPUTER SCIENCE STATE PLAN DRAFT RECOMMENDATIONS

## \*DATA & REPORTING\*

DATA & REPORTING	2024	2025	2026	2027	2028	2029	2030	2031+
SUPPORT LEA DATA REPORTING	support LEAs with secure & regular reporting on CS offerings, K-8 & 9-12							
MCCC DATA DASHBOARD	share data publicly via MCCC data dashboard, updated annually							
KPIS FOR CS ED	define KPIs of CSed							
INFRASTRUCTURE	provide funding and resources for access to broadband and computers							



# Working Group Recommendations: Capacity Building & Licensure (1)

1. Use existing micro-credentialing platforms and courses as pathways for teacher qualification
2. Fund micro-credentialing fees for current computer science teachers in 2024-30
3. Develop a list of approved state-level micro-credential pathways for teacher qualification aligned with licensure standards (endorsements, license via portfolio)
4. Fund a needs assessment and exploration of systems that support micro-credential pathways

# Working Group Recommendations: Capacity Building & Licensure (2)

5. Provide funding and support for licensure and qualification programs to plan and develop pathways and content expertise
6. Develop an expedited approval process with PELSB for programs leading to licensure or endorsement
7. Incentivize participation in all qualification pathways
8. Support for computer science education teacher candidates enrolled in licensure programs (e.g., scholarships, stipends)
9. Sunset the existing math licensure pathway when computer science licensure qualification pathways exist (2030+)

# Working Group Recommendations: Capacity Building & Licensure (3)

10. Review and update the existing CTE license pathways with additional clarity and options for computer science endorsements in collaboration with the Minnesota Association for Career and Technical Education
11. Recommend, but not require, that each district has at least one qualified/licensed computer science educator and a staffing plan by the end of 2028-2030
12. Require each district to have a detailed plan that outlines how districts teach and support computer science offerings and/or pathways in its schools by the end of 2030+
13. Add foundational computer science to teacher licensure renewal requirements

# Working Group Recommendations: Capacity Building & Licensure (4)

14. Include foundational computer science within the Standards of Effective Practice for educators
15. Provide funding for administrators, counselors and other staff to attend computer science professional development specific to their school role to inform decisions and evaluations

# MN COMPUTER SCIENCE STATE PLAN DRAFT RECOMMENDATIONS

## \*LICENSURE\*

LICENSURE	2024	2025	2026	2027	2028	2029	2030	2031+
CS LICENSES	establish 2 new CS licenses							
PROGRAM DEVELOPMENT	funding to qualification providers to establish, plan, and develop pathways and expertise				establish expedited approval process for programs			
MICRO CREDENTIALS						develop microcredentialing system aligned to licensure standards		
INCENTIVE PROGRAM						incentivize participation in CS licensure pathways: preservice + in-service educators		
LICENSURE RENEWAL REQUIREMENTS						add foundational CS to licensure renewal requirements		
STANDARDS FOR EFFECTIVE PRACTICE						add foundational CS to standards for effective practice		
CS STAFFING							recommend but not require: 1 licensed CS educator per district/school	

# Working Group Recommendations: High Quality Professional Development (1)

1. The state legislature should empower the Minnesota Department of Education to convene an advisory committee with the goal of determining the criteria for what constitutes a high-quality, culturally responsive program of professional learning
2. The Minnesota Department of Education and this particular advisory committee should be tasked with the creation of an evaluative tool or series of rubrics that LEAs and school districts can use to vet and recommend computer science professional learning programs
3. Ensure that professional learning supports both standalone computer science course development and integrated approaches to computer science education

# Working Group Recommendations: High Quality Professional Development (2)

4. Expand the scope of which adults in a school community should receive professional development in foundational computer science concepts
5. Expand the scope of what learning experiences are considered “professional development”
6. Align professional development and professional learning to the requirements for teacher licensure, including licensure through the portfolio option
7. The Minnesota Department of Education should provide the supports necessary in the application and reporting processes to ensure that all school districts are able to pursue these grant funds

# Working Group Recommendations: High Quality Professional Development (3)

8. The standard two-year cycle for grant funding should be expanded to a three-year cycle for the purposes of establishing computer science professional learning
9. The state legislature should provide the Minnesota Department of Education with the necessary funds to enact three discrete buckets of grant funding (PD, plan, implementation)
10. The state legislature and the Minnesota Department of Education consider the possibilities of outside funding, such as funding from local industry to provide additional support for educator professional learning



# Working Group Recommendations: High Quality Professional Development (4)

11. The Minnesota Department of Education should leverage already-established cohorts of educators or develop a model of regional educator cohorts that can serve as community hubs to nurture different approaches to computer science education
12. Within each cohort, the Minnesota Department of Education should identify Computer Science Champions to ensure that teacher professional learning is an ongoing endeavor with continued support for educators

# Working Group Recommendations: High Quality Professional Development (5)

13. Following the creation of statewide computer science guidance document, allow regional computer science education cohorts and Computer Science Champions to survey schools, school districts, educational institutions in Institutes of Higher Education, and organizations within their respective region to identify their region's needs and cultural assets as well as generate region-specific goals aligned to the state guideline document
14. The Minnesota Department of Education should develop systems and structures or norms to facilitate interregional communication, including regional conferences and repositories of region-based work

# MN COMPUTER SCIENCE STATE PLAN DRAFT RECOMMENDATIONS

## \*SCHOOL/DISTRICT PLANS & PD\*

SCHOOL/DISTRICT PLANS & PD	2024	2025	2026	2027	2028	2029	2030	2031+
CS ADVISORY COMMITTEE	develop criteria to define high-quality, culturally relevant PD							
GRANT FUNDS FOR PD	schools/districts, PD providers, higher ed: planning + implementation							
STATE CS SPECIALISTS	CS Champions to support schools/districts with regional PD & cohorts							
REGIONAL CS GOALS	determine regional needs and cultural assets; develop regional goals							
SCHOOL / DISTRICT CS PLANS	develop and implement K-12 CS school / district plans: capacity, access, participation, experience							

# Working Group Recommendations: Standards and Credit Equivalency (1)

1. Legislature allocates funds to raise awareness about the significance of computer science and closing the gap in underserved and underrepresented populations of students in computer science
2. Grant rulemaking authority to the Minnesota Department of Education for K-12 Computer Science Standards
3. The Minnesota Department of Education continues to invite members to and maintain members of a computer science advisory committee as defined in the 2023 Computer Science Education Advancement Act, Section 61. This group continues to work together to launch computer science standards, resources and support for districts

# Working Group Recommendations: Standards and Credit Equivalency (2)

4. The Minnesota Department of Education and a computer science advisory committee will develop a computer science guidance document for schools and districts
5. Legislature requires every school and district to make a computer science implementation plan as outlined in the computer science guidance document. Legislature should allocate a one-time amount for planning grant and annual implementation grants until the 2026 Minnesota computer science standards are implemented

# Working Group Recommendations: Standards and Credit Equivalency (3)

6. Legislature will allocate funds for the Minnesota Department of Education and computer science advisory committee to create an online computer science central hub that includes, but is not limited to, resources for teaching (lesson plans), curriculum and learning communities
7. Legislature allocates funds to create regional computer science specialist groups to work with the Minnesota Department of Education's computer science specialist and continue funding these positions.

# MN COMPUTER SCIENCE STATE PLAN DRAFT RECOMMENDATIONS

## \*STANDARDS\*

STANDARDS TASKS	2024	2025	2026	2027	2028	2029	2030	2031+
AWARENESS BUILDING	target underserved & underrepresented populations in CS							
CS ADVISORY COMMITTEE	develop guidance documents & online resource hub							
K-8 STANDARDS			write MN K-8 CS standards					implement K-8 standards
HS COURSE OFFERING								HS to offer at least 1 CS course
ENSURE EQUITABLE ACCESS	increase diversity, accessibility, and access to historically excluded populations in CS							
INDUSTRY CS CERTIFICATIONS								guidance & funding

# Working Group Next Steps

- Tuesday (yesterday) Working Group reviewed and began synthesizing public comments
- Implement Public Comments Via Small Groups
- Last Meeting March 12
- Final Report Available March 22



# Thank You

Jennifer Dugan