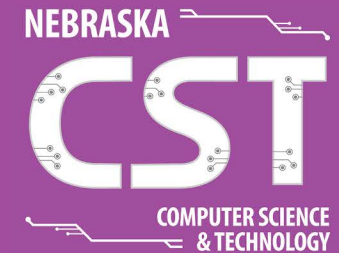


NEBRASKA COMPUTER SCIENCE

2023-2028 STRATEGIC DIRECTION

Nebraska is committed to strengthening Computer Science and Information Technology education and experiences for students grades K–12 to grow the Technology Talent pipeline in our state. Over the past several years, strong collaborative partnerships between the Nebraska Department of Education, University of Nebraska-Lincoln, University of Nebraska-Omaha, University of Nebraska-Kearney, Wayne State College, and the Nebraska Tech Collaborative has resulted in a shared Computer Science Strategic Direction with an Action Plan for 2023-2028. By leveraging the Computer Science Strategic Direction, public and private partners are empowered to align their work to collaboratively accomplish the goals within these five categories. Ultimately, these efforts will enhance high quality Career and Technical Education opportunities for all students in Nebraska.



DIVERSITY

- Increase the number of students from special populations, as defined by Perkins V, participating in Computer Science courses.
- Double the number of special population group members taking the AP Computer Science Principles exam or receiving dual credit in Computer Science.
- Increase the number of students reaching Concentrator status in Information Technology. A secondary CTE Concentrator is a secondary student who, in grades 9–12, has earned credit in at least two courses in a single career cluster program at the intermediate or capstone level.

TEACHER PIPELINE

- Create a model for sustained Computer Science education professional development.
- Establish a 7–12 Computer Science supplemental teaching endorsement.
- Increase the percentage of teachers who teach Computer Science courses that have an approved endorsement.
- Provide instruction on Nebraska K-12 Computer Science standards to all pre-service teachers.

STANDARDS AND CURRICULUM

- Develop elementary and middle school guidance for Computer Science integration.
- Create a K–12 implementation guide for Computer Science including resources that align to the state's high school standards.
- Increase the number of Work-Based Learning experiences available to students who complete an Information Technology Program of Study.
- Review and revise policy at the University level to allow a high school Computer Science course to satisfy a core postsecondary admissions requirement.

OUTREACH

- Increase awareness of the current Computer Science work in the state, communicate the strategic direction, and receive feedback from a variety of stakeholders.
- Develop a communication strategy to increase the awareness of the impact on student outcomes by being a Career and Technical Education Information Technology Concentrator.

FUNDING

- Secure state-level funding dedicated to Computer Science professional development for teachers.

ACTION PLAN 2023-2028

2023-2024

2025-2026

2027-2028

- **High school Computer Science and Technology standards for the graduation requirement adopted by the State Board of Education by March 1, 2024.**
 - Secure funding for teacher recruitment and professional development to support the implementation of the Computer Science and Technology Education Act.
 - Develop Computer Science and Technology 7-12 supplemental teaching endorsement.
 - Create and deliver Computer Science and Technology professional development for K-12 teachers.
 - Create a K-12 Computer Science and Technology implementation guide to signal high quality instructional materials and professional development opportunities to aid teachers and districts in the implementation of the Computer Science and Technology Education Act.
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- **Schools to include Computer Science and Technology instruction in elementary, middle, and high school by the end of the 2025-2026 school year.**
 - Work with postsecondary institutions to allow high school Computer Science courses to satisfy college entrance requirements for math and/or science.
 - Promote Computer Science and Technology education initiatives with all stakeholders.
 - Increase training and networking opportunities for K-12 Computer Science and Technology teachers.
 - Increase Computer Science and Technology education workshops and competitions for students across the state.
 - Develop K-8 Computer Science and Technology guidance aligned to the high school Computer Science and Technology standards.
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- **Class of 2028 required to have 5 credits of Computer Science and Technology education to graduate.**
 - Increase business partnerships statewide to support growth of Computer Science and Technology education.
 - Secure on-going funding to support Computer Science and Technology education in Nebraska.
 - Create a Computer Science and Technology work-based learning model.



2022-2023 NEBRASKA DATA

Computer Science Programs

6,597



Students Enrolled in a
Computer Science
Course

153



Computer
Science
Teachers

123 of 270



High Schools offering
a Computer
Science course

Information Technology Programs

32.82%



Gender
Nontraditional
Program Concentration

13.54%



Work-Based Learning
Participation from
Concentrators

93.14%



Graduation Rate



Data is from the Conference Board for job demand, the Bureau of Labor Statistics for state salary and national job projections data, the College Board for AP exam data, the National Center for Education Statistics for university graduate data, the Gallup and Google research study Education Trends in the State of Computer Science in U.S. K-12 Schools for parent demand, the Computer Science Access Report for schools that offer computer science, and Code.org for its own courses, professional learning programs, and participation data.