



Recommendations to Iowa STEM Council

Iowa STEM Computer Science
Workgroup

Overarching Goal

Identify strategies that can be used to encourage schools and colleges to:

- offer students computer science courses, if such courses are not already being offered, and
- expand offerings of computer science courses, if such courses are already being offered.

Vision

A K-20 pathway that:

- attracts students to,
- prepares students for, and
- produces college- and career-ready individuals to pursue,

computer science studies and professions.

Recommendation 1

Phase in a computer science endorsement, which would be

- required to teach high school computer science courses and optional;
- strongly encouraged to teach middle school computer science courses; and
- optional to teach elementary computer science courses.

Recommendation 2

Ensure that the computer science endorsement may be obtained in a flexible manner – yet assures competency to teach a computer science course or computer science coursework – such as through coursework, co-teaching and mentorships, competency assessment (such as PRAXIS), recognized training, such as Project Lead The Way, or a combination of the foregoing.

Recommendation 3

Require the successful completion of computer science coursework as a requirement of high school graduation.

Recommendation 4

Create and offer accessible and cost-effective professional development opportunities for computer science professionals to serve as mentors for teachers, counselors, students, and parents in regards to computer science careers, pathways of study, equity issues, and workplace learning opportunities.

Recommendation 5

Create an organized central repository of computer science learning resources, including computer science curricula, programs of study currently in place, and summer STEM events and learning opportunities.

Recommendation 6

Provide incentives to K12 schools to integrate computer science into the curricula.

Recommendation 7

Ensure that computer science curricula are, and remain, timely, relevant, sustainable, and responsive to the needs of industry.

Recommendation 8a & 8b

- Ensure that schools possess sufficient and responsive technology – such as broadband, computers, hardware, software, and technical support – to meet the needs of computer science curricula.
- Ensure that schools possess sufficient and responsive staffing – such as teachers, technology directors and integrationists, and counselors – to meet the needs of computer science curricula.

Recommendation 9

Broadly market and publicize computer science professions, pathways of study, and relevant labor market information.

Recommendation 10

Adopt the expanded career service area structure to replace the current K12 service area structure.