

ARKANSAS K-12 COMPUTER SCIENCE

#ARKIDSCANCODE - SETTING THE STANDARD



In September of 2020, the Arkansas Department of Education (ADE) Office of Computer Science began the process of selecting and seating the 2020 Computer Science and Computing Standards and Course Revision Committee¹. The full committee, composed of 48 educators, industry representatives, and state agency employees, in addition to the twelve ADE Office of Computer Science staff members, met for the first time on September 15, 2020. During this meeting, Anthony Owen, State Director of Computer Science, outlined the charge for the committee and separated the full committee membership into preferred subcommittees. Each subcommittee was assigned a leader from the #ARKidsCanCode / #CSforAR Team (Mr. Owen and the Nine Statewide Computer Science Specialists). Mr. Owen led two subcommittees while each Statewide Computer Science Specialist was assigned one subcommittee to lead. Though these leadership assignments were made, Mr. Owen or Ms. Kelly Griffin, Lead Computer Science Specialist, also supported each of the other subcommittees. In addition, multiple Statewide Computer Science Specialists also supported the work of other subcommittees during the drafting phases.

Over the next two months, the full committee met twice more and the subcommittees all met multiple times and also worked asynchronously using online collaboration tools to create drafts of the standards, courses, and pathways. This work represents an estimated 3,000 man-hours spent on standards drafting by the 60 member committee. On November 12, 2020, the full committee met for the last time and voted to turn the draft documents over to the #ARKidsCanCode / #CSforAR Team for final cleanup and proofing.

Since March 2020, #ARKidsCanCode / #CSforAR Team has been meeting each morning at 8:00 a.m. From September 15th to November 20th, this meeting included a daily review of the progress of the subcommittees. In addition, the #ARKidsCanCode / #CSforAR Team, including Mr. Owen, dedicated approximately fifteen full workdays for cleanup and proofing of the standards and documents, representing an additional approximately 1,500 man-hours. On November 23rd and 24th, the internal ADE Office of Computer Science, composed of Mr. Owen, Ms. Griffin, Ms. Morgan Warbington, and Mrs. Emily Torres conducted a final review and proofing of all standards documents and sent them out for public feedback, due back by Wednesday, December 2, 2020.

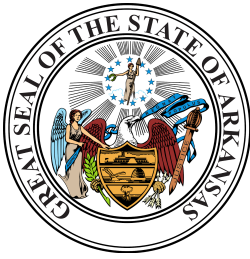
All of the meetings mentioned above were conducted via Zoom.

This revision process resulted in the following:

- Full revision and update of the Computer Science Practices
- Full revision and update of the K-8 (grade specific) Computer Science Standards
- Full revision and update of the Coding Block for Grades 7 and 8
- Full revision, update, and sequencing into program-specific, three-year pathways of the following high school course programs of study:
 - Cybersecurity

¹ Committee Membership List:

https://docs.google.com/spreadsheets/d/1SFj_jRVc-h9RryJe_4HnpnaVbjkWzaOX50C2pcBZwdE/edit?usp=sharing



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- Game Development and Design
- Mobile Application Development
- Networking
- Programming
- Robotics
- Creation and sequencing into program-specific, three-year pathways of the following high school course programs of study:
 - Computer Engineering
 - Data Science
- Update of the following Computer Science and Computing options:
 - Independent Study
 - Internship

These course documents², including results from the public feedback, will be submitted to the Arkansas State Board of Education (SBE) for consideration for adoption during their December 2020 meeting. The requested adoption would include a request for these standards to be implemented beginning with the 2021 - 2022 school year.

In addition, the process of developing a Machine Learning and Artificial Intelligence high school course program of study began in early November, and should be completed in time for submission to the SBE for consideration during their January 2021 meeting, also for implementation beginning with the 2021 - 2022 school year.

² Standards and Course Documents:

https://docs.google.com/document/d/15SAVAyBmadUgsvKBENx-E_JURG4WHwu9SWC6A9y33aw/edit?usp=sharing