

Arkansas Computer Science and Computing Standards

High School Internship

2020

Arkansas Computer Science and Computing Standards for High School Internship

Introduction

A Computer Science and Computing Internship Program shall be designed to assist in a high school student's successful transition to career or college. Students who begin careers immediately upon high school graduation, as well as those who intend to complete post-secondary training prior to starting a career, can benefit from an internship experience. The desired outcomes of the internship program include students advancing computer science skills, sharpening soft-skills, and learning new skills while completing internship assignments in a workplace environment. The internship opportunity shall include a strong business partnership that links the internship and its participants to current resources, information, and guidance from computing professionals. It should provide intense, competency-based worksite immersion in advanced computer science concepts.

Requirements for districts implementing a Computer Science and Computing Internship Program

- A. The district school board must adopt a written policy outlining at minimum the following:
 - a. Eligibility of students
 - b. Internship Program admittance requirements
 - c. Documentation, evaluation, and retention of Internship activities and hours
 - d. Credit to be awarded to a student enrolled in a Computer Science and Computing Internship opportunity
 - i. The district may decide to awarded credit to meet a Computer Science Flex Credit, Career Focus Credit, or local credit only
 - ii. The district may award:
 1. 0.5 credit to a student completing a minimum of 60 Internship hours
 2. 1.0 credit to a student completing a minimum of 120 Internship hours
- B. District policy and implementation of a Computer Science and Computing Internship Program must be in accordance with all applicable federal, state, and local laws and regulations.

A student's Internship plan must be tied directly to extending the computer science concepts found within:

- the most current revision of the Arkansas High School Computer Science and Computing Standards,
- College Board AP Computer Science Principles or A, and/or
- IB Computer Science SL or HL.

Implementation of the Arkansas Computer Science Standards for Internship begins during the 2021-2022 school year.

Course Titles: Internship
Course/Unit Credit: 0.5 credit per listed course code

	Internship - Level 1	Internship - Level 2
Internship	465950	465960

Teacher Licensure: Please refer to the Course Code Management System (<https://adedata.arkansas.gov/ccms/>) for the most current licensure codes.
Grades: 9-12
Prerequisites: There are no ADE established course prerequisites for any of the Arkansas Computer Science and Computing Initiative high school courses; it is up to the local district to determine placement based on student ability.

Computer Science and Computing Practices

Students exhibit proficiency in computer science and computing through:

Communication - Students effectively communicate, using accurate and appropriate terminology, when explaining the task completion or problem solving strategies used. They recognize that creating good documentation is an ongoing and important part of the communication process.

Collaboration - Students productively work with others while ensuring multiple voices are heard and considered. They understand that diverse thoughts may lead to creative solutions and that some problems may be best solved collaboratively.

Storytelling - Students creatively combine multimedia tools, such as graphics, animations, and videos with research, writing, and oral presentations to create ethical, data-driven stories.

Professionalism - Students embrace professionalism by demonstrating skills and behaviors necessary for success in technical careers.

Ethics and Impact - Students comprehend the ramifications of actions prior to taking them. They are aware of their own digital and cyber presence and its impact on other individuals and society.

Inclusion - Students encourage diversity in the field of computer science and computing regardless of race, ethnicity, gender, or other differences.

Learning by Failure - Students reflect upon and critique their work while embracing a willingness to seek feedback and constructive instruction from teachers and peers. They utilize the feedback to continually improve current projects, educational experiences, knowledge, and confidence.

Perseverance - Students expect difficulties and persist in overcoming challenges that occur when completing tasks. They recognize making and correcting mistakes is necessary for the learning process while problem solving.

Understanding - Students recognize patterns, utilize tools, and apply problem solving strategies to build understanding, find solutions, and successfully deliver high-quality work.

Patterns - Students understand and utilize the logical structure of information through identifying patterns and creating conceptual models. They decompose complex problems into simpler modules and patterns.

Problem Solving - Students exhibit proficiency through the process of identifying and systematically solving problems. They recognize problem solving is an ongoing process.

Research - Students purposefully gather information and seek to expand their knowledge through various methods and mediums. They embrace the practice of gaining knowledge to develop novel approaches for solving problems and addressing issues they have not previously encountered, in addition to merely searching for answers.

Tools - Students evaluate and select tools to be used when completing tasks and solving problems. They understand that appropriate tools may include, but are not limited to, their mind, pencil and paper, manipulatives, software applications, programming languages, or appropriate computing devices.

Contributors

The following people contributed to the development of this document:

Dr. Stephen Addison - Professor and CNSM Dean; University of Central Arkansas	Mark McDougal - K-12 Account Executive for Arkansas and Oklahoma; Apple Education
Scott Anderson - Executive Director; Forge Institute - Arkansas Cyber Alliance	Mickey McFetridge - Director of Federal Programs and Professional Learning; Fayetteville School District
Josh Baugh - Senior InfoSec Analyst; Entergy	Dr. Josh McGee - Chief Data Officer and Associate Director of Office for Education Policy; State of Arkansas and University of Arkansas
Garin Bean - Teacher; Cedarville Public Schools	Ben Mcilmoyle - Developer Advocate; Unity Technologies
Kimberly Bertschy - Program Coordinator, Networking and Cybersecurity; Northwest Arkansas Community College	Deborah McMillan - EAST Facilitator; Arkadelphia School District
John Black - Computer Specialist/Cyber Range Manager; University of Central Arkansas	Eli McRae - Statewide Computer Science Specialist; Arkansas Department of Education Office of Computer Science
Sarah Burnett - STEM Project Coordinator; Arkansas Tech University	Alex Moeller - Statewide Computer Science Specialist; Arkansas Department of Education Office of Computer Science
Julia Cottrell - K-8 STEM Coordinator; Van Buren School District	Daniel Moix - Director, STEM Pathways; Arkansas School for Mathematics, Sciences, and the Arts
Dr. Miles Dyson - Director of Special Projects; Cyberdyne Systems	Adam Musto - STEM Program Coordinator; Arkansas Division of Career and Technical Education
Jake Farmer - Teacher; Arkansas Arts Academy	Allison Nicholas - Director of Recruiting; Metova Inc.
Carl Frank - Teacher; Arkansas School for Mathematics, Sciences, and the Arts	Anthony Owen - State Director of Computer Science; Arkansas Department of Education Office of Computer Science
Jim Furniss - Statewide Computer Science Specialist; Arkansas Department of Education Office of Computer Science	Dr. Elizabeth Parker - Director of Financial and Statistical Analysis; Dillard's
Tammy Glass - Statewide Computer Science Specialist; Arkansas Department of Education Office of Computer Science	Kimberly Raup - Teacher; Conway Public Schools
Tommy Gober - Curriculum Development Specialist; CYBER.ORG	Ryan Raup - Teacher; Conway Public Schools
Keith Godlewski - Teacher; Rogers Public Schools	Stacy Reynolds - Teacher; McGehee School District
Sean Gray - Teacher; Marion School District	Mike Rogers - Senior Director Maintenance and Refrigeration; Tyson Foods
Kelly Griffin - Statewide Computer Science Lead Specialist; Arkansas Department of Education Office of Computer Science	Christy Ruffin - Teacher; Lake Hamilton School District
John Hart - Statewide Computer Science Specialist; Arkansas Department of Education Office of Computer Science	Jordan Sallis - Cyber Intelligence Manager; GlaxoSmithKline

John Hightower - Department Head Computer Science and Engineering; University of Arkansas at Fort Smith	Leslie Savell - Statewide Computer Science Specialist; Arkansas Department of Education Office of Computer Science
Philip Huff - Assistant Professor of Cybersecurity and Director of Cybersecurity Research; University of Arkansas at Little Rock	Dr. Karl Schubert - Professor of Practice and Assoc. Director, Data Science Program; University of Arkansas
Grant Hurst - Teacher; North Little Rock School District	Amanda Seidenzahl - Director of Regional Workforce Grants; University of Arkansas at Fort Smith
Chris Jennings - Teacher; Valley View Public Schools	Nicholas Seward - Teacher; Arkansas School for Mathematics, Sciences, and the Arts
Lori Kagebein - Statewide Computer Science Specialist; Arkansas Department of Education Office of Computer Science	Dr. Thilla Sivakumaran - Vice Chancellor of Global Engagement and Outreach ; Arkansas State University
Michael Karr - Makerspace Program Coordinator; National Park College	Courtney Speer - Technology Coach; Nettleton School District
David Kersey - Executive Director; PIXEL: A School for Media Arts	Joel Spencer - STEAM Magnet Coordinator; Little Rock School District
Catherine Leach - Associate Professor; Henderson State University	Zackary Spink - Statewide Computer Science Specialist; Arkansas Department of Education Office of Computer Science
Sandra Leiterman - Managing Director; UA Little Rock Cyber Gym	Emily Torres - Policy Development Coordinator; Arkansas Department of Education Office of Computer Science
Rhaelene Lowther - Associate Professor of Art: Game Art, Animation, and Simulation; Southern Arkansas University	Morgan Warbington - Program Advisor; Arkansas Department of Education Office of Computer Science
Gerri McCann - Teacher; Manila School District	Bill Yoder - Executive Director; Arkansas Center for Data Sciences
Amy McClure - Course Implementation Specialist; Virtual Arkansas	Bradford Young - Teacher; Mountain Home School District