

Arkansas Computer Science Standards for Grades 9-12

Independent Study

2016

Independent Study

A Computer Science Independent Study Program shall be designed to enrich the student's computer science educational experience. The student will be required to develop an educational plan, submit it to a local advisor or advisory board responsible for reviewing, monitoring, and approving the plan. The student will produce a final product for presentation.

Requirements for Districts implementing a Computer Science Independent Study Program

- A. The district school board must adopt a written policy outlining at minimum the following:
 - a. Eligibility of Students
 - b. Independent Study Program Admittance Requirements
 - c. Documentation, evaluation, and retention of Independent Study activities and hours
 - d. Credit to be awarded to a student enrolled in a Computer Science Independent Study 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 independent study hours
 2. 1.0 credit to a student completing a minimum of 120 independent study hours
- B. District policy and implementation of a Computer Science Independent Study Program must be in accordance with all applicable federal, state, and local laws and regulations.

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

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

Course Title: 465910 - Independent Study Level 1
465920 - Independent Study Level 2

Course/Unit Credit: 0.5 Credits per Course/level

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 Computer Science levels; it is up to the local district to determine placement based on student ability.

Computer Science Practices

Students will exhibit proficiency in computer science through:

Perseverance - Students expect and persist in overcoming the challenges that occur when completing tasks. They recognize that making and correcting mistakes will take place during the learning process and problem solving.

Collaboration - Students effectively work and communicate with others 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.

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.

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 application programs, programming languages, or appropriate computing devices.

Communication - Students effectively communicate, using accurate and appropriate terminology, when explaining the task completion or problem solving strategies that were used. They recognize that good documentation is an ongoing part of the process, and when appropriate, provide accurate documentation of their work in a manner that is understandable to others.

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.

Problem Solving - Students exhibit proficiency in Computer Science through identifying and systematically solving problems (e.g., engineering design process). They recognize problem solving as an ongoing process.

Contributors

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