

2019 EDITION

Arizona Computer Science Education Guide



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Why Computer Science?

In the 21st century, coding is a foundational skill, just like reading and writing. Everyone should get the chance to learn to code—it's a skill that provides limitless creative opportunities to students and future generations.

With great curriculum, resources, and support, school districts across the country can implement high-quality computer science programs. At CodeHS, our goal is to make computer science education fun and accessible to all!

Arizona CS Education Overview

In 2018, the Arizona State Board of Education and the Arizona Department of Education developed new **K-12 computer science standards**. Arizona Governor Doug Ducey, a huge supporter of computer science education, also announced \$1 million dollars in funding to support computer science professional development in the 2019 fiscal budget.

Source: Arizona Governor Doug Ducey Office of Education

Arizona CS Standards

CodeHS Alignment to Arizona CS Standards

- Alignment to Arizona 6th Grade Standards Framework
- Alignment to Arizona 7th Grade Standards Framework
- Alignment to Arizona 8th Grade Standards Framework
- Alignment to Arizona High School Standards Framework

Arizona Computer Science Course

Arizona Computer Science is the first CodeHS course fully aligned to Arizona Computer Science Standards and it's FREE!

Access the full course for free at codehs.com/arizona_cs/start

Arizona State Pathway

Here are the CodeHS courses that align with Arizona 6-12th Computer Science Standards. You can also view this interactive pathway at codehs.com/arizona_pathway.

6th	7th	8th	9th	10th	11th	12th
World of Computing						
	Introduction to the Internet					
		Arizona Computer Science				
			Introduction to Cybersecurity (Vigenere)			
				AP Computer Science Principles		
					AP Computer Science A (Nitro)	

Course Overview



World of Computing

Grade Levels: 6th, 7th

The World of Computing course is a first computer science course introducing the basics of programming with Karel the Dog, and allowing students to explore what a computer is and how technology has affected their lives. Students will learn to code using blocks to drag and drop, but they can switch between blocks and text as desired. With a unique focus on creativity, problem solving and project based learning, World of Computing gives students the opportunity to explore several important topics of computing using their own ideas and creativity and develop an interest in computer science that will foster further endeavors in the field.



Introduction to the Internet

Grade Levels: 7th, 8th

Introduction to the Internet is a first computer science course introducing the basics of designing a web page and how information and images are represented with computers. Students will create a portfolio on the web of projects they build throughout the course.



Arizona Computer Science

Grade Levels: 8th, 9th, 10th

In this course, students build on K-8 experiences and learn more technical and sophisticated applications. Students refine their skills in differentiating problems or subproblems that are best solved by computing systems or digital tools and those that are best solved by humans. Students will further develop their computational thinking and problem solving skills to support the selection and appropriate use of technology.



Introduction to Cybersecurity

Grade Levels: 9th, 10th, 11th

As our world becomes increasingly dependent on technology, cybersecurity is a topic of growing importance. It is crucial that companies and individuals take precautions to protect themselves from the growing threat of cyber attacks. This course prepares students with crucial skills to be responsible citizens in a digital future. The Introduction to Cybersecurity is the first online blended K12 cybersecurity course and is designed for students with some exposure to computer science, but there are no specific course prerequisites. Topics included are: foundational cybersecurity topics including digital citizenship and cyber hygiene, the basics of cryptography, software security, networking fundamentals, and basic system administration. This course is one year for high school students.



AP Computer Science Principles

Grade Levels: 10th, 11th, 12th

AP Computer Science Principles introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, AP Computer Science Principles prepares students for college and career.



AP Computer Science in Java (Nitro)

Grade Levels: 11th, 12th

Learn the basics of object-oriented programming with a focus on problem solving and algorithm development. Take this course and prepare to ace the AP Java test.

Explore all free CS course in the CodeHS Course Catalog at
codehs.com/course/catalog

Professional Development

CodeHS' online and in-person professional development helps train teachers to teach excellent computer science courses -- no programming experience required.

Learn more at codehs.com/info/pd

Online PD Courses

The online PD courses are made up of a series of learning modules that cover both the basics of programming and the pedagogy of teaching programming in a blended classroom. Teachers can complete it on own time, during summer, school professional development days, or school holidays.

- Teaching Intro to Computer Science
- Teaching AP Computer Science Principles
- Teaching AP Computer Science A
- Teaching Computing Ideas
- Teaching Intro to Python
- Teaching Web Design
- Teaching Intro to Cybersecurity
- Level 2 Professional Development for CS Teachers



In-Person PD Workshops

The in-person professional development workshops are for districts looking to train multiple computer science teachers. Workshops can be 1 or 2 days, and cover a variety of topics including leveraging blended tools in computer science classes, subject specific topics, how to customize your class using the CodeHS platform, and more.



CodeHS

Bring a Full Computer Science Program to Your District

Contact us at hello@codehs.com.



Contact Us

We'd be happy to chat more!

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