2021 EDITION

# South Carolina 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 how to code—it's a skill that provides limitless creative opportunities to students and future generations.

With a 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!

# South Carolina CS Education Overview

The South Carolina Department of Education has mandated computer science since 1997. Many students fulfilled the high school graduation requirement by only taking a half-credit course in keyboarding. Fast forward to 2018 - Keyboarding was eliminated as an option for fulfilling the one-half of the Computer Science requirement.

In May of 2017, The K-8 South Carolina Computer Science and Digital Literacy Standards for K-8 were approved to expand availability of computer science education to all students in South Carolina. Shortly after, in August 2018, South Carolina developed computer science standards for high school in response to growing employment opportunities in computer science around the state.

Source: South Carolina Department of Education

# Standards Alignment

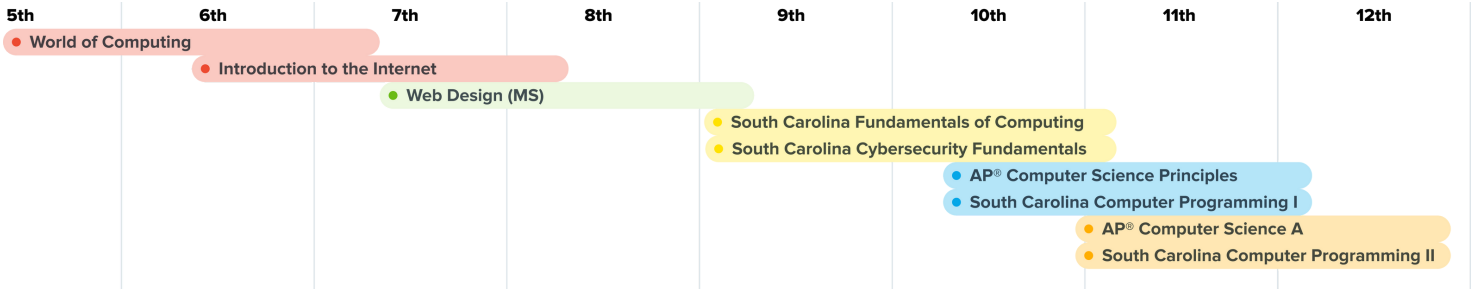
*CodeHS Alignment to South Carolina CS Standards*

CodeHS is aligned to South Carolina's 6-8 Standards, as well as courses in the high school Computer Programming pathway.

- Alignment to **South Carolina's 6-8 Standards**
- Alignment to **South Carolina's Computer Programming Pathway**

# South Carolina 6-12 CS Curriculum Pathway

This table shows our recommended 6-12 curriculum pathway which provides a robust, coherent computer science pathway that teaches students 5 programming languages over the course of middle school and high school.



# Course Overview

## World of Computing

**Grade Levels: 5th, 6th**

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. 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: 6th, 7th**

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.

## Web Design

**Grade Levels: 7th, 8th**

The CodeHS Web Design course is a project-based course that teaches students how to build their own web pages. Students will learn the languages HTML and CSS, and will create their own live homepages to serve as portfolios of their creations.

## South Carolina Fundamentals of Computing

**Grade Levels: 9th, 10th**

Fundamentals of Computing is designed to introduce students to the field of computer science through an exploration of engaging & accessible topics. Through creativity & innovation, students will use critical thinking and problem solving skills to implement projects. Students will gain a fundamental understanding of the history & operation of computers, programming, web design, computing careers & will examine societal & ethical issues of computing.

## South Carolina Cybersecurity Fundamentals

**Grade Levels: 9th, 10th**

This course examines the core concepts and terminology of cybersecurity and information assurance, integrating the importance of user involvement, network architecture, threats, and security; operational and system security; cryptography, and a broad range of other topics.


## AP Computer Science Principles

**Grade Levels: 10th, 11th**

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.

## South Carolina Computer Programming I

**Grade Levels: 10th, 11th**

This course of study is designed to emphasize the fundamentals of computer programming. Note, this course has not been released.


## AP Computer Science A (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.

## South Carolina Computer Programming II

**Grade Levels: 11th, 12th**

This course of study is designed to emphasize the fundamentals of computer programming. Note, this course has not been released.

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**Explore all free CS courses 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 Teacher Love

"Thank you so much for creating the SC course! I am working with another online instructor for the state and we have around 600 students enrolled in our courses for the fall. You just made my life much easier - I wanted the animations and games and I am hoping that a career section will be coming soon!"
Sheila Dartez, Mauldin High School, Greenville, South Carolina

"My students love CodeHS and it allows them to work at their own pace."
Richard Whitehead, Fort Mill High School, South Carolina

# Facts About South Carolina CS

1,423 students in South Carolina took AP Computer Science exams in 2019 (373 AP CSA, 1050 AP CSP); only 32% of exams were taken by females, an increase of 7% from the previous year.

South Carolina currently has 3,375 open computing jobs (2.8 times the average demand rate in South Carolina).

Computer programmers and software developers in South Carolina have an average annual salary of $77,383, which is significantly higher than the overall average state salary at $43,210

*Sources: College Board, Bureau of Labor Statistics, Code.org*

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!

hello@codehs.com | codehs.com | @codehs