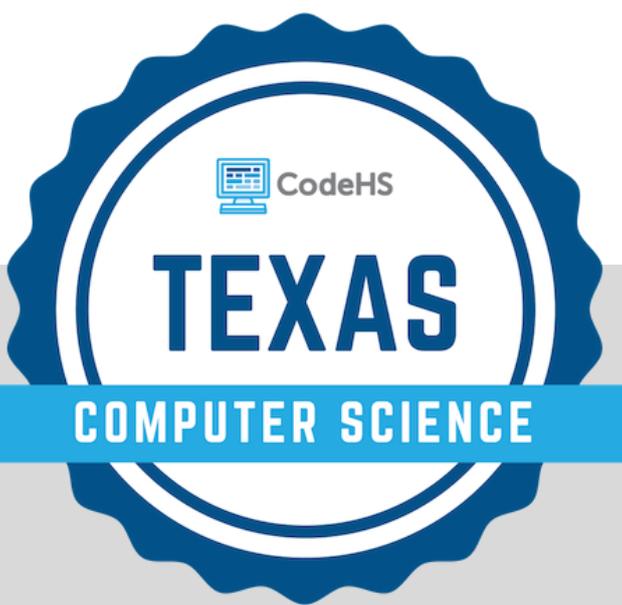


2020 EDITION

Texas Computer Science Education Guide



Prepared by CodeHS
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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!

Texas CS Education Overview

Texas has been a leader in computer science education for years. The State Board of Education adopted a Long-Range Plan for Public Education that establishes goals through the year 2030. The goal is to provide children access to the resources they need to learn, thrive, and grow. This reflects a desire to have equitable access to funding, advanced courses (including computer science) and modern technology.

According to the Technology Applications Curriculum Requirement, every Texas district must offer computer science 74.3(b)(2)(I) and each student must have the opportunity to participate in Computer Science II or AP Computer Science 74.3(b)(4).

Source: South Carolina Department of Education

Standards Alignment

CodeHS works to map all of the standards from TEKS to our courses, offering six fully aligned courses in our 6-12 pathway.

Standard	Course	Alignment	Syllabus
TX Fundamentals of CS	TX Fundamentals of CS	View (100%)	Syllabus
TX Web Communications	TX Web Communications	View (100%)	Syllabus
TX Web Design	TX Web Design	View (100%)	Syllabus
CS I	TX CS I	View (100%)	Syllabus
CS II	AP CSA	View (76%)	Syllabus
AP CS P	AP CSP in Python & JavaScript	View (100%)	Syllabus
AP CSA	AP CSA	View (100%)	Syllabus

Texas 6-12 CS Curriculum Pathway

Here are the CodeHS courses that align with Texas middle school and high school computer science state standards for grades 6-12.

6th	7th	8th	9th	10th	11th	12th
Introduction to the Internet						
World of Computing						
		Texas Fundamentals of Computer Science				
			Texas Web Communications			
			Texas Web Design			
			Texas Computer Science 1			
				AP Computer Science Principles		
					AP Computer Science A (Nitro)	

Course Overview



Introduction to the Internet

Grade Levels: 6-8

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.



World of Computing

Grade Levels: 6-8

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.



Texas Fundamentals of Computer Science

Grade Levels: 8-9

This year-long course is intended as a first course for those students just beginning their study of CS. Students will learn about the computing tools that are used every day, while developing their ability to creatively solve real-world problems. This course introduces the basics of programming with Karel the Dog, the foundations of designing a web page with HTML/CSS, and how information is represented digitally and sent over the internet.



Texas Web Communications

Grade Levels: 9

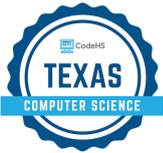
This semester-long course explores digital citizenship, information literacy, creative credit and copyright, online and in-person collaboration, designing and developing accessible websites as an avenue to personal creativity, and understanding structural aspects of computing (e.g., hardware, servers, devices, file organization).



Texas Web Design

Grade Levels: 9-10

This 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. By the end of this course, students will be able to explain how web pages are developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multi page websites.



Texas Computer Science 1

Grade Levels: 9-10

Computer Science I will foster students' creativity and innovation by presenting opportunities to design, implement, and present meaningful programs through a variety of media. Through data analysis, students will identify task requirements, plan search strategies, and use computer science concepts to access, analyze, and evaluate information needed to solve problems.



AP Computer Science Principles in JavaScript or Python

Grade Levels: 10-12

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. Both the JavaScript and Python versions are endorsed by the College Board and have been updated for the 2020-2021 school year.



AP Computer Science A (Nitro)

Grade Levels: 11-12

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 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

“I really appreciate the help that you're giving me. Sometimes I get so frustrated with coding, but I can't give up, I have to keep on trying in order to improve my skills in CodeHS.”

- Rene, Student at Highlands High School in San Antonio, Texas

“Teaching Computer Science has ignited my passion for the subject. CodeHS has been a big part of that.”

-Christopher, Teacher at Arlington Classics Academy Middle School in Arlington, Texas

Texas CS Facts



In 2019, 12,394 students in Texas took the AP Computer Science exams and only 27% were female.



Computer programmers and software developers in Texas have an average salary of \$94,779, which is significantly higher than the average salary in the state at \$49,720.



Approximately 71,478 computing jobs are open in Texas, which is 4.2 times the average demand.

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](https://twitter.com/codehs)