



vidcode

# Course Catalogue

All courses are aligned to CSTA standards, K-12 CS pathway, CCSS for Math and NGSS. Additionally, we are aligned to every state's CS standards.



## Cross-disciplinary Coding 101

In Cross-Disciplinary Coding 101, students learn how to create postcards, memes, games and graphics with code. Use X-Y coordinates, scale, and rotation, to add graphics, gifs, text and music to projects of your choice. This course is ideal for teachers from all subject areas including social studies, math, science and art.

**Grade levels:** Upper Elementary & above, Beginner

## Cross-disciplinary Coding 201

In Cross-disciplinary Coding 201, you can build off of what you've learned in Cross-Disciplinary Coding 101. Create interactive memes, slideshows and hardware projects. Gain a foundation of programming and problem-solving skills applicable across disciplines and link Vidcode into existing coursework.

**Grade levels:** Upper Elementary & above, Beginner

## JavaScript 101: Memes

In JavaScript 101, students will begin learning to program in JavaScript with a focus on creativity and confidence! Students will be creating custom filters (as popularized by apps such as Instagram) and their own "meme." Students will learn about the core programming concepts of sequence, functions, variables and objects.

**Grade levels:** Middle School, Beginner

## JavaScript 201: Stopmotion

Students will learn how to organize different kinds of data content into arrays and become versed in using variables to turn their media content into coding masterpieces. Another important aspect is that students will learn how to incorporate math and randomness into their projects in order make their projects come alive!

**Grade levels:** Middle School, Beginner

## JavaScript 301: Film Transitions

Students' programs will come alive in this course! JavaScript 301 introduces loops for repeating code, as well as the use of operators to perform comparisons and mathematical operations. Students will use these skills to create more projects, including video text messages about issues that are important to them.

**Grade levels:** Middle School, Intermediate



## JavaScript 401: Karaoke

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JavaScript 401 introduces if statements or conditionals, and promotes more collaboration between students using commenting in their code. Using conditionals and logical operators, students will be able to add complexity to their programs and continue learning how to think like a programmer. Students create their own news channel, laser project and a culminating Karaoke project - all of which can be adapted to their interests. Upon completion, students will have all the necessary tools to continue creating their own projects using JavaScript.

**Grade levels:** Middle School, Intermediate

## JavaScript 101 en Español

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En JavaScript 101, los estudiantes aprenderán a programar enfocados en la creatividad y confianza! Los estudiantes crearán filtros personalizados (igual que las aplicaciones de Instagram) y sus propios memes. A través de dichas actividades, los alumnos aprenderán conceptos básicos de programación y funciones de secuencia, variables y objetos los cuales serán presentados con tutoriales y reforzados con prácticas.

**Grade levels:** 5-12, Beginner

## JavaScript 201 en Español

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En JavaScript 201, los estudiantes aprenderán herramientas tan poderosas de programación que parecerán mágicas. Los estudiantes aprenderán a organizar diferente información (audios, videos, imágenes, textos, formas, etc) dentro de matrices y serán habilidosos utilizando variables para convertir su contenido multimedia en obras maestras. Las matrices son listas ordenadas de información que contienen palabras, números, objetos y más. Los alumnos crearán animaciones en volumen, colocando marcos en la matriz en el orden que ellos quieran que aparezca en el video.

**Grade levels:** 5-12, Beginner

## JavaScript 301 en Español

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En JavaScript 301, los programas de los estudiantes cobrarán vida! JavaScript 301 presenta circuitos para repetir códigos y repasar matrices, así como el uso de operadores para hacer comparaciones y operaciones matemáticas. Los estudiantes aprenderán como indexar matrices para crear historias completas, utilizando emojis y códigos.

**Grade levels:** 5-12, Intermediate



## Computer Science 101: AR Games

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Vidcode's Computer Science 101 course is the first course in our year long high school track. This course aligned to all state standards for high school computer science I. It is ideal for 9-12 grades as well as for younger students in middle school who want to be challenged with extra material. Build your first programs with a real web programming language including AR games, memes, human computer interaction and motion graphics.

**Grade levels:** High School, Beginner

## Computer Science 201: Text-based Harmonies

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This portion of the Computer Science series begins with a on Loops & Animations. Write your own repeat loops and build Animoji projects. In the second half of this course, go further into understanding of conditionals. Make projects like changing text based on a condition, heartbeat simulations and a karaoke project.

**Grade levels:** High School, Beginner

## Computer Science 301: Algorithms and Art

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Build interactive multimedia and storytelling programs while learning about algorithms, culminating in a final project of creating an app for others. Students create projects in pop art, emoji games and weather apps. Vidcode also provides quizzes to test students' ability to recognize what a given piece of code does and accurately describe computer science concepts.

**Grade levels:** High School, Intermediate

## Computer Science 401: Simulations

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Learn how to create a celebrity name generator culminating in a final project of creating a password protected application. Go further into logic with a choose your own codeventure focus using keyboard events. Create multiplayer racing games and finish with a final project surrounding museum exhibits.

**Grade levels:** High School, Intermediate

## Computer Science 501: Sliders & Apps

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Build on the programming skills they learned in Computer Science 401 and begin applying these skills to larger more complex projects. The projects cover a wide range of visual, interactive and algorithmic elements that you can recombine into useful apps, including custom buttons and sliders, instantiating multiple copies of objects, managing large numbers of variables in data structures, and writing readable and reusable code.

**Grade levels:** High School, Advanced

## Computer Science 601: Data Visualizations

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Build on the programming skills you learned in Computer Science 501 and begin applying these skills to analyze data sets and make data visualization. Advanced text-based programming where students build interactive multimedia and storytelling programs with a real web programming language. At the end of this course students are proficient in object-oriented programming, computer science I and JavaScript.

**Grade levels:** High School, Advanced

## Web Development

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This course serves as either an off-ramp from Vidcode's JavaScript courses into traditional web development, or as a standalone course to teach your students how to make personalized, interactive websites. This course is filled with 8 projects, tutorials, answer keys, and discussion topics, to get your students creating on the web.

**Grade levels:** Middle School, High School, Beginner to Intermediate

## Hardware

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Learn the basics behind how to get hardware and software to communicate with each other to make interactive sketches using the Makey Makey. After you've mastered the basics, you'll move on to create some rockin' instruments using a Makey Makey and Javascript. Introduces circuits, hardware, software, human-computer interaction, and object-oriented programming.

**Grade levels:** Middle School, High School, Beginner

## Digital Citizenship

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The Digital Citizenship Course is filled with activities that integrate coding and call on critical and ethical thinking skills. The goal of this course is to equip students with the skills to become ethical, safe, and productive digital citizens, through the lens of creating responsibly with code. Students create projects integrating topics of "digital citizenship" (the norms of appropriate, responsible, behavior with regard to technology use). Topics include media literacy, ethics, searching for trustworthy sources online, digital literacy, and communicating with others and presenting yourself online.

**Grade levels:** 4-12, Beginner

## Game Development

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In this course, students learn to create their own games and simulations. These activities cover creating objects, using keyboard and mouse click events to make them do things, and simulating physics. Students start by creating their own Avatar and advance to create their own Augmented Reality games.

**Grade levels:** Middle School and High School, Beginner



## Texas Computer Science I

This year-long course is intended as a 9th - 11th grade computer science course for beginners. Through projects including AR games, art & technology as well as data visualizations - students will complete a TEKS aligned computer science pathway. They will master object-oriented principles of coding including loops, conditionals, if/then statements and more. You can easily track their progress and auto-grade with our built in quizzes including formative and summative assessments.

**Grade levels:** Beginner & Intermediate

## Virginia Middle School Computer Science

This semester-long course is exploratory and covers the standards required for middle school computer science in Virginia. The projects are conceptual, and open-ended and students learn in a self-guided learning environment. This course is research-backed and proven to increase students' learning outcomes in computer science.

**Grade levels:** Middle School, Beginner & Intermediate

## Who is Vidcode?

Vidcode is a female-founded company on a mission to provide an accessible and engaging way for all students to learn computer programming.

Vidcode is committed to working with schools, volunteers, parents and institutions to provide delightful, inclusive and rigorous computer programming curriculum to students everywhere.



## Request your state's coding course

We are aligned to every state's middle and high school coding standards

Contact Info | [info@vidcode.com](mailto:info@vidcode.com)

Website | [vidcode.com](http://vidcode.com)