

Computer Science Advanced Course Overview 80 Hours



Advanced Course Overview

The course takes a wide lens on computer science by covering topics such as programming, web development, design, and data. The course inspires students as they build their own websites, apps, games.

Core concepts:

- Website development
- Mobile Apps development
- Animations and Game development



Source: [Hyperiondev](#)

Animations and Game Development Overview

Students build on their coding experience as they program animations, interactive art, and games in Game Lab. The unit starts off with simple shapes and builds up to more sophisticated sprite-based games, using the same programming concepts and the design process computer scientists use daily. In the final project, they'll develop a personalized, interactive program.



Web Development Overview

Website development

- Students learn how to create and share the content on own web pages. After deciding what content they want to share with the world, they'll learn how to structure and style web pages using HTML and CSS.

```
<!DOCTYPE html>
<html>
  <head>
    <link rel="stylesheet" href="style-
sheet.css">
    <h3>
      Favorites</h3>
  </head>

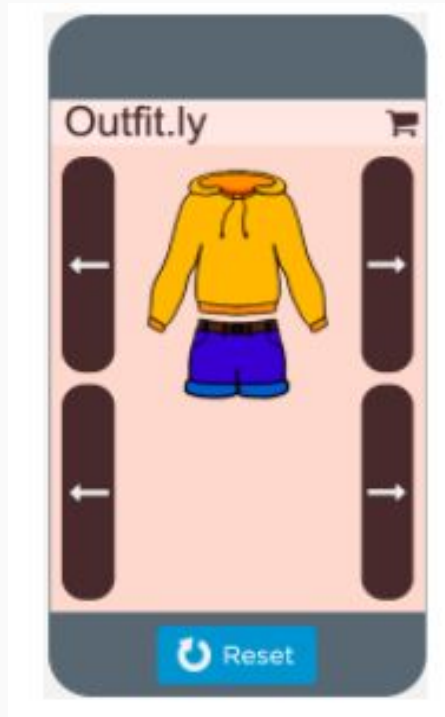
  <body>

    <div>
      To start off, my favorite animal is
a cat. They are just so fuzzy and cute. Not
to mention soft, too....
    </div>
    
    <div>Stringer, pixabay.com, CC0</div>
    <div>
      My favorite hobby is reading books.
Although I like it indoors, too, I find it
relaxing reading a book near a lake in a
breezy day. If inside, then I would like to
read a book, sitting near a window, when
it's pouring. In both places, though, there
will always be music. It just helps me to
better work my brain and imagine as I read.
    </div>
    
    <div>Karoline Grabowska, pixabay.com
CC0</div>
  </body>
</html>
```



Mobile Apps Development Overview

Students design their first app while learning both fundamental programming concepts and collaborative software development processes. Using the JavaScript language, students learn about algorithms and program design as they create a series of real working, shareable apps



Course Details

- Start dates and schedules will be coordinated directly with student.
- **Course Duration:** 8 monthly classes, 1 hour duration each class
- Includes: Home access for extra practice
- **Total Course Duration:** 80 hours - Completion of Advanced Level

