Lexington High School

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App Development Xcode

iOS Coding-App Design

Course description

Technology has a language. It's called code, and coding is an essential skill. Learning to code teaches you how to solve problems and work together in creative ways, and it helps you build apps that bring your ideas to life. You should have the opportunity to create something that can change the world. You will learn and write code in this course.

Course objectives

Students will learn the basics of Swift and Xcode. They will use this knowledge to design and build an app.

Prerequisites

None

Materials Needed

•Pencils •Internet Access •Computer •Programing Notebook

Grading Scale

A+	98-100	C+	82-84
A	93-97	C	77-81
B+	90-92	D+	74-76
B	85-89	D	70-73
		F	Below 70

Daily Participation

Will be 15% of final grade. If you miss class you can make up points.

Semester Test Grade

Will count 10% per semester
Q1 grades + Q2 grades= 90% Semester Grade= 10%
Q3 grades + Q4 grades= 90% Semester Grade= 10%

Course Final

Students will work individually or in a group to develop an app for a local business. They will be presenting this app to the local business for feedback.

Course outline

Lesson 1: By engaging in interactive, hands-on explorations of coding concepts in the context of everyday situations, students will begin to think like coders. They'll learn about commands, sequences, loops, events, and algorithms. Working collaboratively, students will practice predicting the output of their code, as well as debugging their own and others' code. They'll also practice using their skills in visual-based coding apps, solving puzzles and designing their own creations. Optional design activities guide students through a design process to conceptualize and prototype an app idea that solves a problem in their class or school.
Lesson 2: Students will explore fundamental coding concepts and practice thinking like coders. Along with learning about algorithms, functions, loops, conditional statements, and variables, they'll discover the basics of user interface design. Students will work both collaboratively and individually as they strengthen their coding skills by solving real coding problems, testing each other's code, and designing programs for a range of bots. They'll also practice these skills in Tynker, solving a range of problems and applying the concepts they learn in classroom activities. Optional design activities guide students through a design process to conceptualize and prototype an app idea that solves a problem in their class or school.
Lesson 3: Students will go through a design cycle that focuses on prototyping, much like the process that professional app developers go through. Even though students are just starting to learn how to program, it's not too early for them to imagine the apps that they might want to build. The work that they put into the prototype will set them up for future development.
Lesson 4: Students will design and build their app.

Course grading

The main forms of assessment for this course is the notebook, lesson activities, and completion of projects. The following items will be evaluated in the student's notebook:

•Daily entries
•Proper formatting was used for each entry
•Lesson questions have been answered
•Lesson objectives have been met
•Sketches and diagrams have been included and are properly labeled
•Correct formulas

Tests/Quizzes will also be used to assess how much the student has learned after lessons.