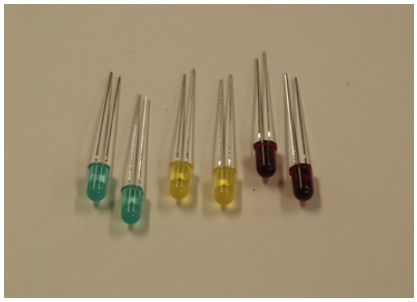
LAB KIT

Kit Overview

You will need to purchase either the EK-LM4F120XL or the EK-TM4C123GXL board from Texas Instruments and a set of electronic components. The cost for these parts is about $32 US plus shipping. The kit comprises a microcontroller board, plus some extra electronics. These extra electronics include a protoboard, six LEDs, four switches, an audio jack, a slide pot, resistors, and some 22 or 24 gauge solid wire. For the slide pot any resistance from 10k to 50k is OK. In addition, it doesn't matter how long the slide pot is, any slide distance from 10 to 60mm will be fine. There is an optional LCD graphics display.

Overview Microcontroller Mechanicals Electricals Optional Display



Can I take this course without buying the kit?

Yes, there are three approaches to taking this class. You could just listen to the videos, read the assignments, and play with the interactive learning tools. The second option involves installing the Keil uVision integrated development environment on a Windows PC, and performing the lab assignments in simulation mode. The third option, which fully captures the essence of embedded systems, can be done by performing the lab assignments on a real system that you will purchase. This third option is required to pass the course and receive the certificate.

What does it mean for the display to be optional?

The final project will be a arcade-style game. We expect most students to not buy the optional display, but rather they will connect the microcontroller board to the PC. In this manner, the output of the handheld game will be displayed on a window of the PC. However, for about $10 plus shipping, you can order a small Nokia 5110 LCD display so your handheld game can be operated in a stand-alone fashion.