What Do I Need For This Course?

This course is meant for individuals who are **not familiar with microcontrollers and/or the C programming language**.

Additionally, **for more experienced individuals, the course will expedite the learning curve** for the Texas Instruments MSP430 and Code Composer Studio integrated development environment.

To receive the maximum benefit of the course, students will need:

1. The Texas Instruments (TI) software development tool, Code Composer Studio (CCS). This is a free download. Details for downloading CCS are included in the first laboratory manual.

2. A TI MSP430FR6989 Launchpad board. This is available from a number of different electronics distributors and Texas Instruments. It has the TI part number **MSP-EXP430FR6989**.

    Texas Instruments MSP430FR6989 Launchpad Order Site

3. A small variety of electronic components including a prototype board, resistors, light emitting diodes (LEDs), switches, wires.

    TI has partnered with one distributor, element14, to make all of the electronic components *except for the Launchpad* available in a lab kit:

    element14 Lab Kit Information

    If you would prefer to order the components separately, or check to see if you already have some of the components, we have listed everything you need on the next page.

MSP-EXP430FR6989

Red LEDs

Yellow LEDs

Green LEDs

Wire Jumpers (male-female)

Wire Jumpers (male-male)

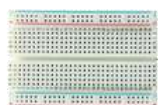Wire Jumpers (female-female)

Push-button Switches

100Ω resistors

470Ω resistors

Potentiometer

TI TLC5615CP Digital-to-Analog Converter

Breadboard

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The software examples are self-contained low-level programs that typically demonstrate a single peripheral function or device feature in a highly concise manner. Therefore, the code may rely on the device's power-on default register values and settings such as the clock configuration and care must be taken when combining code from several examples to avoid potential side effects. Additionally, the tutorials and software examples should not be considered for use in life support devices or systems or mission critical devices or systems.

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