Course

Table of Contents

[Agenda 2](#_Toc526254911)

[Electrical Components 2](#_Toc526254912)

[Circuits and Components 2](#_Toc526254913)

[Resources 2](#_Toc526254914)

[Soldering 3](#_Toc526254915)

[Badge Programming 3](#_Toc526254916)

[Introduction to Programming Using Arduino 3](#_Toc526254917)

[Introduction to Programming Using Command Line 3](#_Toc526254918)

[Resources 3](#_Toc526254919)

# Agenda

## 

## Electrical Components

#### Tools Needed

Multimeter (shared)

#### Circuits

1x Coin cell battery

1x Coin cell battery holder

1x Breadboard

~~1x Breadboard power supply~~

2x LED

2x Resistors

1x Switch

2x Jumper Wires (Male to Male)

### Circuits and Components

Water model?

V=IR

Resistor

Capacitor

Diode / LED

Inductor

### Resources

<https://www.electronics-tutorials.ws/>

## Soldering

#### Tools

Soldering Iron

Multimeter (shared)

Side Cutters

#### Components

1x PCB prototype strip board

10x assorted resistors

2x LED

1x 0.8mm Solder

## Badge Programming

#### Tools

Soldering Iron

Multimeter (shared)

Cutters

#### Components

1x Round Charlieplexing Badge PCB

1x Attiny 13A SSU

20x LED

5x 100 ohm resistors

1x Coin cell battery

1x Coin cell battery holder

### Introduction to Programming Using Arduino

The IDE

Adding Support for ATtiny13A

Basic Coding

Writing to Badge

### Introduction to Programming Using Command Line

Basic command line

AVR Tool Suite

Writing to Badge

Write to EEPROM (Optional)

### Resources

…