

# Introduction to IoT

Welcome to Day 1 of our IoT Workshop! Today, we introduced the basics of IoT through presentations and hands-on activities, covering topics from setting up your development environment to hardware essentials and soldering.

## 1. IoT Intro Presentation

## 2. Setup Development Environment

- [Install Arduino IDE](#), for more information see the [Official documentation](#)
  - [Installing ESP8266 NodeMCU Board in Arduino IDE 2.0](#)
- [How to install CH340 driver - Driver Download Section](#)

## 3. Hardware Review

- Dev Board: Wemos D1 Mini
- Microcontroller: ESP8266 12-E Chip [ESP8266 hardware review](#)

## 4. Soldering

Here it gets practical! You need to solder the microcontroller and some of the sensors, which you will need in the next session.



Fig. 1: In Action at UNICAES

## 5. Coding Warm-up

Now let's check if your Microcontroller works. Also, you will learn how to upload your first sketch.  
Basic Blink example:

[Blink.ino](#)

```
void setup() {  
    // initialize digital pin LED_BUILTIN as an output.  
    pinMode(LED_BUILTIN, OUTPUT);  
}  
  
// the loop function runs over and over again forever  
void loop() {  
    digitalWrite(LED_BUILTIN, HIGH); // turn the LED on (HIGH is the  
    voltage level)  
    delay(1000);                     // wait for a second  
    digitalWrite(LED_BUILTIN, LOW);  // turn the LED off by making the  
    voltage LOW  
    delay(1000);                     // wait for a second  
}
```

## Recording

## Additional information

Additional information: [Introduction to IoT - Sensors and Data processing](#)

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