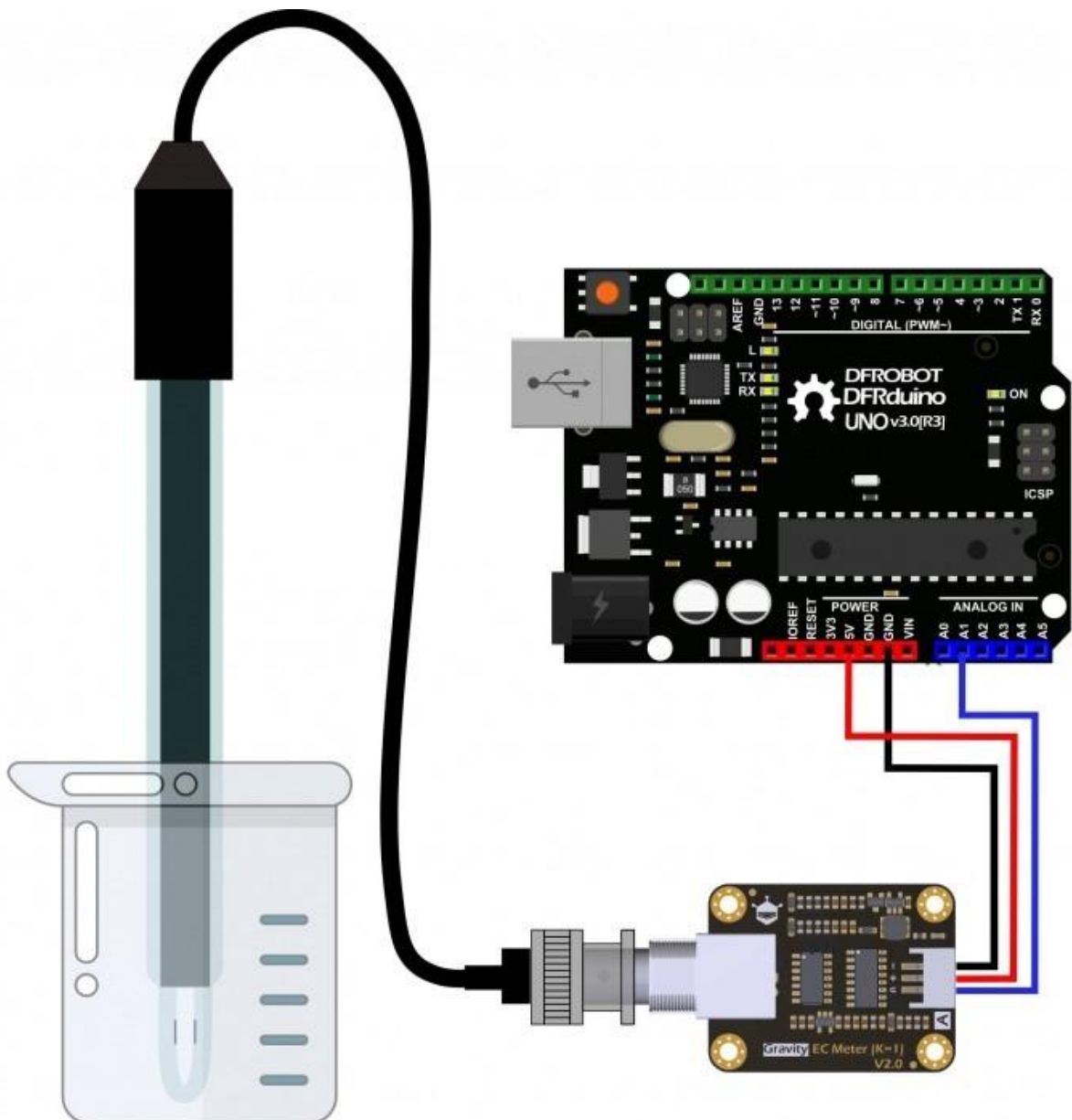


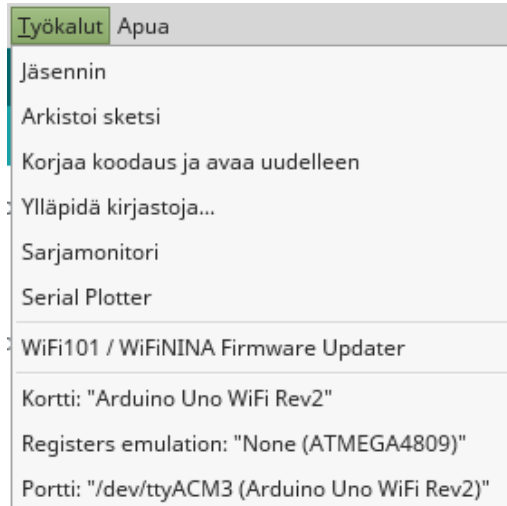
Analog Electrical Conductivity Sensor

1. Liitä Arduino Uno Wifi Rev2 USB-johdolla tietokoneeseen.
2. Yhdistä sensori ja Arduino Uno Wifi Rev2 toisiinsa seuraavalla tavalla:



3. Avaa Arduino IDE.

4. Tarkista, että kohdissa "Kortti", "Portti" sekä "Registers emulation" lukee alla olevat tekstit (Huom! Portin nimi riippuu omasta koneestasi / käyttöjärjestelmästä):



5. Lataa "DFRobot_EC Library" kirjasto täältä:

https://github.com/DFRobot/DFRobot_EC/archive/master.zip

6. Asenna kirjastot täällä: Sketsi/Sisällytä kirjasto/Tuo .ZIP kirjasto.

7. Kirjoita seuraava koodi Arduino IDE:seen.

```
/*  
 * file DFRobot_EC.ino  
 * @ https://github.com/DFRobot/DFRobot_EC  
 *  
 * This is the sample code for Gravity: Analog Electrical Conductivity Sensor / Meter Kit V2 (K=1.0), SKU: DFR0300.  
 * In order to guarantee precision, a temperature sensor such as DS18B20 is needed, to execute automatic temperature compensation.  
 * You can send commands in the serial monitor to execute the calibration.  
 * Serial Commands:  
 * enter -> enter the calibration mode  
 * cal -> calibrate with the standard buffer solution, two buffer solutions(1413us/cm and 12.88ms/cm) will be automatically recognized  
 * exit -> save the calibrated parameters and exit from calibration mode  
 *  
 * Copyright [DFRobot](http://www.dfrobot.com), 2018
```

```
* Copyright  GNU Lesser General Public License
```

```
*
```

```
* version  V1.0
```

```
* date  2018-03-21
```

```
*/
```

```
#include "DFRobot_EC.h"
```

```
#include <EEPROM.h>
```

```
#define EC_PIN A4
```

```
float voltage,ecValue,temperature = 25;
```

```
DFRobot_EC ec;
```

```
void setup()
```

```
{
```

```
  Serial.begin(115200);
```

```
  ec.begin();
```

```
}
```

```
void loop()
```

```
{
```

```
  static unsigned long timepoint = millis();
```

```
  if(millis()-timepoint>1000U) //time interval: 1s
```

```
  {
```

```
    timepoint = millis();
```

```
    voltage = analogRead(EC_PIN)/1024.0*5000; // read the voltage
```

```
    //temperature = readTemperature(); // read your temperature sensor to execute temperature compensation
```

```
    ecValue = ec.readEC(voltage,temperature); // convert voltage to EC with temperature compensation
```

```
    Serial.print("temperature:");
```

```
    Serial.print(temperature,1);
```

```
    Serial.print("^C  EC:");
```

```
    Serial.print(ecValue,2);
```

```
    Serial.println("ms/cm");
```

```
  }
```

```
  ec.calibration(voltage,temperature); // calibration process by Serail CMD
```



```
}
```

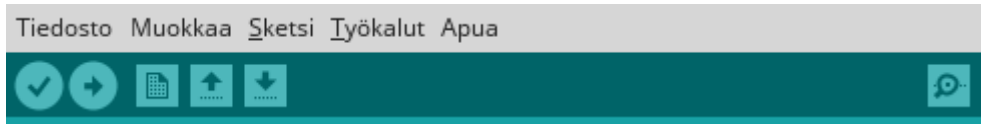
```
float readTemperature()
```


```
{
```

```
  //add your code here to get the temperature from your temperature sensor
```

}

8. Tarkista koodi painamalla  sekä siirrä koodi Arduino Uno WiFi Rev2 –laitteeseen painamalla :



9. Paina sarjamonitori-näppäintä  ja vaihda NL arvoksi **115200** baudia. Tässä vaiheessa mittauksen pitäisi käynnistyä. Tuloksena pitäisi tulla jotain vastaavaa:

