# Node MCU

<https://www.teachmemicro.com/intro-nodemcu-arduino/>

### Step 1: Connect your NodeMCU to your computer

You need a USB micro B cable to connect the board. Once you plugged it in, a blue LED will start flashing. If your computer is not able to detect the NodeMCU board, you may need to download the driver on [this page](https://www.silabs.com/products/development-tools/software/usb-to-uart-bridge-vcp-drivers).

### Step 2: Open Arduino IDE

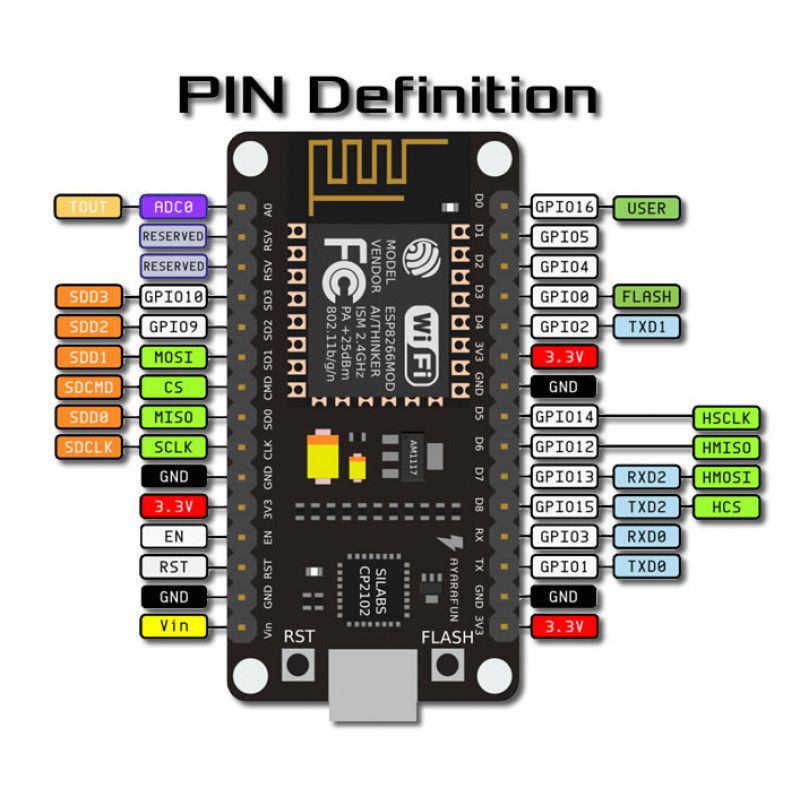
You need to have at least Arduino IDE version 1.6.4 to proceed with this.

Go to File > Preferences. In the "Additional Boards Manager URLs" field, type (or copy-paste) http://arduino.esp8266.com/stable/package\_esp8266com\_index.json. Don't forget to click OK!

Then go to  Tools > Board > Board Manager. Type "esp8266" in the search field. The entry "esp8266 by ESP8266 Community" should appear. Click that entry and look for the install button on the lower right.

# Wifi connection

|  |
| --- |
| #include <ESP8266WiFi.h> |
|  |  |
|  | const char\* ssid="Your SSID – network-properties"; |
|  | const char\* password = "Your Password"; |
|  |  |
|  | int ledPin = 13; |
|  |  |
|  | void setup() { |
|  |  |
|  | pinMode(ledPin,OUTPUT); |
|  | digitalWrite(ledPin,LOW); |
|  |  |
|  | Serial.begin(115200); |
|  | Serial.println(); |
|  | Serial.print("Wifi connecting to "); |
|  | Serial.println( ssid ); |
|  |  |
|  | WiFi.begin(ssid,password); |
|  |  |
|  | Serial.println(); |
|  | Serial.print("Connecting"); |
|  |  |
|  | while( WiFi.status() != WL\_CONNECTED ){ |
|  | delay(500); |
|  | Serial.print("."); |
|  | } |
|  |  |
|  | digitalWrite( ledPin , HIGH); |
|  | Serial.println(); |
|  |  |
|  | Serial.println("Wifi Connected Success!"); |
|  | Serial.print("NodeMCU IP Address : "); |
|  | Serial.println(WiFi.localIP() ); |
|  |  |
|  | } |
|  |  |
|  | void loop() { |
|  | // put your main code here, to run repeatedly: |
|  |  |
|  | } |



Led matrix

<https://www.instructables.com/id/Interface-LED-Dot-Matrix-8x8-With-NodeMCU/>

# connect to restapi

#include <ESP8266HTTPClient.h>

#include <ESP8266WiFi.h>

const char\* ssid="NETGEAR43";

const char\* password = "dynamiclake424";

int ledPin = 13;

void setup() {

pinMode(ledPin,OUTPUT);

digitalWrite(ledPin,LOW);

Serial.begin(115200);

Serial.println();

Serial.print("Wifi connecting to ");

Serial.println( ssid );

WiFi.begin(ssid,password);

Serial.println();

Serial.print("Connecting");

while( WiFi.status() != WL\_CONNECTED ){

delay(500);

Serial.print(".");

}

digitalWrite( ledPin , HIGH);

Serial.println();

Serial.println("Wifi Connected Success!");

Serial.print("NodeMCU IP Address : ");

Serial.println(WiFi.localIP() );

}

void loop() {

if(WiFi.status()== WL\_CONNECTED){ //Check WiFi connection status

HTTPClient http; //Declare object of class HTTPClient

http.begin("http://192.168.1.21:8000/esp\_check/"); //Specify request destination- ip address of pc- ipconfig

http.addHeader("Content-Type", "text/plain"); //Specify content-type header

int httpCode = http.POST("Message from ESP8266"); //Send the request

String payload = http.getString(); //Get the response payload

Serial.println(httpCode); //Print HTTP return code

Serial.println(payload); //Print request response payload

http.end(); //Close connectiona

}else{

Serial.println("Error in WiFi connection");

}

delay(30000); //Send a request every 30 seconds

}