Gravity: Arduino Zero to Hero Kit

SKU: KIT0133

INTRODUCTION

Open-source, plug & play electronics toolkit for learning Arduino platform

Online course created by Sanjin Dedić

Welcome to the world of electronics and programming!

DFRobot proudly presents the Arduino Zero to Hero E-learning Kit which comes complete with an online course created by a well-known Australian Robotics Engineer and Teacher: Sanjin Dedić. The online course is perfect for ambitious beginners and intermediate Arduino users

trying to take their circuitry and programming to the next level. See video preview and tutorial list below:

/Link/

Redeem The course:

Step 1 Go to https://robotix.com.au/#/course and enter the code above

Step 2 After you enter code the link to course access will open

Step 3 Sign up IMMEDIATELY because link will expire in 1 hour

*If you have trouble redeeming, email sanjin@headstartacademy.com.au

Tutorial Content List:

CIRCUITRY ONLY TUTORIALS:

1. LED Button Circuit
2. Potentiometer LED Control
3. Simple Current Amplifier
4. Darlington Bridge Current Amplifier
5. Glow in the Dark Circuit
6. And Logic Gate
7. Or Logic Gate
8. NOT Logic Gate

BASIC TUTORIALS

1. LED Blink Rate Investigation
2. Using Random To Select LED's Control Delays
3. Programming Input / Output with Push Buttons

INTERMEDIATE TUTORIALS

1. Analog Input Demonstrations with Voltage Dividers
2. Photodiodes and LDR in Voltage Divider Light Sensing Circuits
3. Arduino Light Theremin

4. LM 35 Temperature Sensor with Graph Plotting
5. Maxwell Colour Wheel with RGB LED
6. RGB LED Colour Mixer with 3 Potentiometers
7. Microphone Clap Switch
8. Microphone Calibrated Double Clap Switch
9. Sound / Music Reacting Circuit
10. Button Controlled Frequency Generator
11. Piano Circuit with 4 Tones
12. Sound Effects Generator (Fibonacci, Space Guns etc…)
13. Temperature Plotting Program
14. 7 Segment Display Circuit
15. 7 Segment Guess The Number Game
16. Reaction Time Measuring Circuit (using LED and Sound Triggers)

ADVANCED TUTORIALS:

1. Creating Arrays to Store Reaction Time Results
2. Saving Reaction Time Results to SD Card
3. Plotting the SD Card Results in Excel
4. Memory Training Game
5. Infrared Remote Control Circuit
6. Infrared Remote Controlling a Speaker and LED Panel
7. Reading Accelerometer and Gyroscope Values
8. Connecting Arduino to Processing
9. Control LED's via Computer Mouse (using Processing)
10. Visualising Gyroscope and Accelerometer Values (using Processing)

SPECIFICATION

1. Microcontroller: DFRduino UNO R3
2. Power Supply: 5V USB Power
3. Dimension: 220cm * 165cm * 65 cm
4. Weight: 300g

SHIPPING LIST

- DFRduino UNO R3 x1
- USB Cable A-B x1
- Jumper Cables M/M x30
- Jumper Cables F/M x10

- Resistor 220R x20
- Resistor 4.7K x20
- Resistor 10K x20
- Resistor 1K x20
- 5mm LED x10
- IR Receiver Diode x1
- Mini Push Button x4
- PT5I850AC Ambient Light Sensor x1
- GL5528 Ambient Light Sensor x1
- 2N3904 Transistor x1
- Tilt Switch Sensor x1
- 8-Segment LED x1
- LM35 Temperature Sensor x1
- Buzzer x1
- 10K Potentiometer x3
- Mini Controller (with battery CR2025 inside) x1
- 400 Tie Point Interlocking Solderless Breadboard x1
- Acrylic breadboard holder for Arduino x1
- Gravity IO Expansion Shield for Arduino V7.1 x1
- Gravity: Analog Sound sensor for Arduino x1
- Gravity: Digital Speaker Module x1
- Gravity: Digital PIR (Motion) Sensor for Arduino x1
- 6 DOF Sensor - MPU6050 x1
- MicroSD card module for Arduino x1