





Physical Computing and Internet-of-Things (IoT) Kit Requirements

Please note

1. If you HAVE purchased Arduino Starter Kit (<https://store.arduino.cc/genuino-starter-kit>) then please ensure go to OPTION 1 to buy additional components required for the course.
2. If you have NOT purchased anything yet, please go to OPTION 2.
3. Product availability & price are from Amazon and can vary from other suppliers.
4. Find alternative supplies from key components list provided next to each item.


OPTION 1

Description	Details	Q	Total £
ESP8266 ESP-12E/F 1. Minimum 4 required	  AZDelivery NodeMCU V2 WiFi Amica ESP8266 ESP-12F I2C Development Board CP2102 3.3V IoT Open Source Serial WiFi Module PWM IIC compatible with Arduino Including E-Book! (Pack of 5) OR AITRIP 3pcs ESP8266 CP2102 ESP-12E Internet WiFi Development Board Open Source Serial Wireless Module Works Great for Arduino IDE/Micropython	1	18.99 OR 15.99
Micro USB 1. Minimum 4 required <i>(reuse if you already have some)</i>	 Gritin Micro USB Cable,[3-Pack/1M+1.5M+2M] Nylon Braided Extremely Durable Fast Micro USB Sync Cable for Nexus, LG, Sony,PS4, HTC, Motorola, Kindle, Nokia and More	2	13.98
Breadboards 1. At least 3x 830 points	 SUNFOUNDER Breadboards Kit 3PCS 830 Point 2PCS 400 Point Solderless Prototype Breadboards for Arduino Proto Shield Distribution Connecting Blocks(5 Pack)	1	10.99
Jumper wires	 Elegoo 120pcs Multicolored Dupont Wire 40pin Male to Female, 40pin Male to Male, 40pin Female to Female Breadboard Jumper Wires Ribbon Cables Kit for arduino	1	6.99

<p>Sensors & accessories kit</p> <p><u>Key components list</u></p> <ol style="list-style-type: none"> 1. Ultrasonic Distance 2. Touch 3. Relay 4. OLED 5. LCD 16x2 6. Jumper wires 7. LEDs 8. DHT11/22 9. Resistors 	 <p>Module Sensor Kits for Arduino 0.96" OLED 1602 LCD Display,Relay,Servo Motor, DHT11,Ultrasonic,Obstacle Avoidance Module for Arduino UNO R3 Mega Nano Raspberry Pi Starter Projects(English Tutorial)</p> <p><i>Please note, this kit might become unavailable or out of stock but select alternative "Sensors kit" on Amazon or elsewhere with <u>key components listed</u> on the left.</i></p>	1	19.99
<p>RFID kit</p> <ol style="list-style-type: none"> 1. MFRC522 Reader Sensor Module 2. RFID Chip Key Ring 3. S50 Card 13.56MHz 	 <p>AZDelivery RFID Kit - MFRC522 RC522 RF IC Card Reader Sensor Module, RFID Chip Key Ring and S50 Card 13.56MHz I2C IIC SPI, Compatible with Arduino and Raspberry Pi including E-Book!</p>	1	2.99
<p>Watering system</p> <ol style="list-style-type: none"> 1. Soil Moisture sensor 2. Water pump 3. Relay 4. Tube 	 <p>RUNCCI-YUN Automatic Irrigation DIY Kit Self Watering System with Capacitive Soil Moisture Sensor 1 Channel 5V Relay Module and Water Pump + 1M Vinyl Tubing for Garden Plant Flower Herb Potted</p>	1	7.99
			81.92

OPTION 2

Description	Amazon Item Details	Q	Total £
ESP8266 ESP-12E	 AITRIP 3pcs ESP8266 CP2102 ESP-12E Internet WiFi Development Board Open Source Serial Wireless Module Works Great for Arduino IDE/Micropython	1	15.99
Micro USB Minimum 4 required. <i>(reuse if you already have some spare)</i>	 Gritin Micro USB Cable.[3-Pack/1M+1.5M+2M] Nylon Braided Extremely Durable Fast Micro USB Sync Cable for Nexus, LG, Sony,PS4, HTC, Motorola, Kindle, Nokia and More	1	5.59
Breadboards At least 3x 830 points	 SUNFOUNDER Breadboards Kit 3PCS 830 Point 2PCS 400 Point Solderless Prototype Breadboards for Arduino Proto Shield Distribution Connecting Blocks(5 Pack)	1	10.99
Jumper wires	 Elegoo 120pcs Multicolored Dupont Wire 40pin Male to Female, 40pin Male to Male, 40pin Female to Female Breadboard Jumper Wires Ribbon Cables Kit for arduino	1	6.99
Weather Station Minimum required 1. ESP8266-12E 2. OLED LCD 3. DHT11 or DHT22 4. Micro USB	 ESP8266 Weather Station Kit with DHT11 Temperature Humidity BMP180 Atmospheric Pressure BH1750FVI Light Sensor 0.96" OLED IIC YellowBlue Display for Arduino IDE IoT Starter(Tutorial Included)	1	18.99
Sensors and accessories (204 items) <i>Please note, this kit might become unavailable or out of stock but select alternative "Sensors kit" on Amazon or elsewhere with components listed.</i>	 Freenove RFID Starter Kit for Raspberry Pi 4 B 3 B+ 400, 423-Page Detailed Tutorials, Python C Java Code, 204 Items, 53 Projects, Solderless Breadboard <p>Key sensors & components list</p> <ol style="list-style-type: none"> 1. Ultrasonic Distance, 2. Touch, 3. Relay, 4. OLED, 5. LCD 16x2, 6. Jumper wires, 7. LEDs, RFID kit 10. MFRC522 RC522 RF IC Card Reader, 11. RFID Chip Key Ring and 12. S50 Card 13. 56MHz I2C IIC SPI 	1	32.95

	8. DHT11/22, 9. Resistors		
Watering System 1. Soil Moisture sensor 2. Water pump 3. Relay 4. Tube	 RUNCCI-YUN Automatic Irrigation DIY Kit Self Watering System with Capacitive Soil Moisture Sensor 1 Channel 5V Relay Module and Water Pump + 1M Vinyl Tubing for Garden Plant Flower Herb Potted	1	7.99
			99.49