

Newton Chinese Language School

课程介绍 Course Description

课程名称 Course Name	在做的过程中学习---Arduino UNO 单板计算机（嵌入式系统） Learning by Doing--- Arduino UNO Single Board Computer(Embedded System)
招生对象 Prospective Students	中学生/高中生 (不需要有任何基础) Middle School / High School Students
教学目标 Teaching Objectives	兴趣培养/电子技术入门 Interest development/Introduction to electronic technology
教学内容 Teaching Content	<ol style="list-style-type: none"> 1) 传统计算机（台式计算机/笔记本电脑）原理介绍与实践拆解安装。 Traditional Computer(Desktop/Laptop) Introduction, Disassemble and Assemble 2) 嵌入式计算机/单板机原理介绍和实物演示。 Embedded Computer/Single Board Computer (Arduino Uno)/ Principle Introduction and Demonstration. (Arduino Uno)/ Circuit Playground Express/Raspberry Pi/BB-black/Boe-Bot robot kit 3) Arduino IDE Installation and the Hello World Hardware with Basic Led Blink Control. 4) Digital Input /Output, talk to the Digital world. 5) Analog Input /Output, talk to the analog world the real world. 6) Communication, Serial Port set up and Programming. 7) Sensors Input, How to use different Sensors. 8) Output and Display, the interface. 9) USB, the most useful port. 10) Projects (Need to be designed according to match students requirement and foundation)
教学方法 Teaching Method	课堂教学 Classroom Teaching 实验演示 Experimental Demonstration 动手实验 Hands-on Experiments
使用教材 Teaching Materials	Arduino Website : https://www.arduino.cc/en/Guide/ArduinoUno Self-made PPT