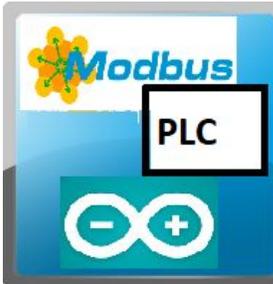


PLC Lab at home using Arduino and CODESYS - E-learning



Product Description

PLC Lab at home using Codesys, HMI, Arduino and Modbus TCP - E-learning

This course provides hands-on **Step by Step** experience to integrate, Arduino, PLC and HMI using Modbus TCP by implementing real industrial projects.

Real projects will be designed step by step to help you grasp the concepts.

By the end of this course, you will be able to integrate various technologies to control industrial automation projects in multiple ways, like using **Soft-PLC with Arduino** and using **HMI with Arduino**.

The materials also contain a lot of videos that will teach you **various skills**. Stuff like, **Ladder logic programming, HMI design, VFD driving** and many other cool lectures that you can use to expand the Arduino integration in real industrial automation projects.

You will use technologies and brands like :

- **Arduino**
- **CodeSys**
- **Schneider Electric**
- **Modbus TCP**
- **VFD (Industrial motor drivers)**

And the best part is **you will be able to simulate and integrate** most of the things without having to buy any expensive industrial automation hardware. However, if you plan to buy the equipment, then you will be able to **design your projects** since this course will walk you through Programming and schematic of two complete integration projects.

This course will be based on the famous industrial protocol Modbus **TCP**, where you will learn how to use it in integrating almost any Modbus TCP supported device with Arduino, and just to note, this protocol supported by over 70% of the industrial automation devices and equipment.

What you need is:

- Arduino UNO
- Arduino Ethernet shield
- PC/Laptop with Windows
- Some wires and potentiometer
- **Optional** (8-CH Arduino Relay external card with 5v 700mA minimum power supply)

All **software we will use are free** so you don't need to worry about obtaining any of them, all the links will be provided, noting that these are very highly professional software used by the biggest companies around the world and are by no mean poorly developed ones.

Skills you will learn in this course:

- Arduino Integration with CodeSys Soft PLC systems
- Arduino integration with HMI
- Learning how to use Modbus TCP with multiple equipment
- Basic VFD driving using Arduino
- Design HMI screens in two different software
- Designing in Ladder Logic
- Handling Classical VFD devices (Industrial motor drivers)
- Using Arduino to simulate small size industrial automation projects

General Information



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Product PLC Lab at home using Codesys, HMI,
Arduino and Modbus TCP - E-learning

Order Number 48651

Sales CODESYS Store
store.codesys.com

Scope of Delivery

- +7 Hours of E-learning video content
- Unlimited Access
- Maximum of 2 users per license

System Requirements and Restrictions

Programming System	CODESYS Development System V3.5.5.0
Target System	CODESYS Control V3.5.5.0
Supported Platforms / Devices	Notice: Use the project 'Device Reader' to find out the supported features of your device. 'Device Reader' is available for free in the CODESYS Store.
Additional Requirements	e.g. external tools
Restrictions	Text
Licensing	e.g. License activation optional on CODESYS Runtime Key or CODESYS Soft Key (part of CODESYS Controls)
Required Accessory	e. g. CODESYS Security Key