



LESSON PLAN

Arduino Uno Q - Module 2

Intro / Setup / OS Installation

ZONE: Software Zone

AGE GROUP: 15-18

MATERIALS: Laptops/Internet/Arduino Uno Q

DESCRIPTION: This workshop aims to teach participants basic coding and its fundamentals, using Python and Arduino, going from knowing the board, do the full setup and configuration, write the basic Python/Arduino code to test the board. In addition, participants will have an “Open-Eye” on many different new technology that implements multiple hybrid systems.

ENGINEERING DESIGN CHALLENGE:

LEARNING OBJECTIVES:

After attending this session, participants will gain:

- What is AppLab IDE
- What is CLI Flasher.
- How to Setup Arduino Uno Q board.
- How to Configure Arduino Uno Q board.
- How to Use AppLab for Python.
- How to Use AppLab for Arduino.

Time / Duration	Activity	Materials/requirements
5 min	1- Introduce yourself and Studio5. 2- Ask about Robotics and Coding prior knowledge (ice-breaking)	Computer, internet access
20 min	Presentation : • What is AppLab IDE • What is CLI Flasher. • How to Setup Arduino Uno Q board. • How to Configure Arduino Uno Q board. • How to Use AppLab for Python. • How to Use AppLab for Arduino	Computer, internet access

Time / Duration	Activity	Materials/requirements
45 min	<u>Hands on : (Step by Step)</u> 1. Use AppLab IDE 2. Prepare the Uno Q board for boot/setup menu 3. Write multiple commands in Uno Q terminal to start the process 4. Install the latest Linux system 5. Do the configuration and connect the board 6. Plug in the board and start coding on both Python and Arduino sides	Computer, internet access.
45 min	Help the participants to do the whole process from connection to coding	Computer, internet access.

	Consideration	Materials/requirements
	1. We need to consider participants has multiple knowledge levels 2. We need to make sure all participants will do the setup/configuration correctly	



THANK YOU