



Embedded Labs

This course consists of a list of labs for embedded systems engineering students to acquire the necessary knowledge and skills to implement simple technical objects supporting microcontrollers.

These labs are a summary of a microcontroller architecture, its different peripherals (RCC, GPIO, Cortex, Timer, I2C, ADC, USART) and how to configure these peripherals according to the application needs. In the last labs, we will use an RTOS (FreeRTOS) to create a real time application.

During the labs, we will use an academic bench provided by **SOFIATECH**. This bench is based on a MENZU board (developed by **SOFIATECH**) and contains many components like leds, buttons, potentiometer, resistors, relays, H-Bridge, 3.3V power, 12V power, RS232 connector ...