Smart devices

Microcontrollers and Open Source Hardware		
Understand microcontroller archictecture and how to use them	1	Portfolio
Be able to design data acquisition system (sensor, conditioner, microcontroller) with respect to the application	1	Portfolio
Be able to design the electronic circuit of a sensor's signal conditioner (design + simulation)	1	Portfolio
Be able to design a shield to accommodate the gas sensor	1	Portfolio
Be abe to design the sofware to use the gas sensor and its HMI	1	Portfolio
Be able to combine all of the above mentioned components into a smart device	1	Portfolio

1-level of application: follow-up of instructions or procedures
2-level analysis: improvement or optimization of solutions or proposals
3-level of control: design of programs or definitions of specifications
4-level of expertise: definition of guidelines or strategies