

[FRANCAIS] Architecture électronique pour l'énergie



ECTS
5 crédits



Hourly volume
66h

Introducing

Objectives

General objectives: the goal of this UF is to know how to determine, size and produce the electronic architecture of an on-board system, select the components, under energy constraints: constraint of battery, autonomy, availability of power sources. energy? The UF therefore addresses questions of the architecture of electrical energy converters, the installation of charging and battery management systems, and architecture with multiple energy sources (advertising energy). The measurement of physical quantities (current, voltage, temperature, etc.) is essential in an energy conversion or control chain for an electromechanical actuator. The UF also deals with the various sensor technologies and associated Electronic Instrumentation and Measurements.

At the end of this module the student will be able to:

- Design an electronic architecture of an embedded system under energy constraints
- Select appropriate electronic components for energy converter system
- Choose electrical energy storage solutions according to the associated constraints
- (Battery Management System / cell balancing
- Implement an ambient energy harvesting solution to design embedded systems energy self-sufficient
- Create a co-design HW / SW

Practical info

Location(s)

 Toulouse