ARCHITECTURES EMBARQUÉES ET INFORMATIQUE INDUSTRIELLE

EMBEDDED SYSTEMS ARCHITECTURES

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| Lecturers : 16.0 | TC : 10.0 | PW : 8.0 | Autonomy : 14.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

The objective of this module is to describe the most commun computing systems in embedded system and industrial computing. Lecture and problem classes will be turn on the study of lightweight and modern computing systems with more details on the architecture and programming. Practical session will hightlight automotve and home automation applications.

Keywords : embedded electronic, microcontroler, architectures

Programme

- Introduction to analog, digital and mixed electronic
- programmable architectues : CPLD, FPGA
- microcontroler architectures (1)
- microcontroler architectures (2)
- microcontroler and DSP (Digital signal processing unit) architectures (3) and programming
- Processors and memory architectures and management
- Hardware and software architectures of wireless sensor network

Learning outcomes

Independent study

Objectifs : This activity is not concerned with framed autonomy activities outside personal work.

Méhodes : This activity is not concerned with framed autonomy activities outside personal work.

Core texts

C. Tavernier, Dunod, 978-2-10-049978-6, *MICROCONTRÔLEURS PIC - DESCRIPTION ET MISE EN ŒUVRE*

Assessment

Final mark = 70% Knowledge + 30% Know-how
Knowledge mark = 100% final exam
Know-how mark = 100% continuous assessment