

Embedded Computer Architecture



ECTS
4 crédits



Hourly volume

Introducing

Objectives

At the end of this module, the student should have understood and be able to explain:

- The principles and specificities of networks used in embedded systems in the automotive, avionics and connected objects,
- The specificities of operating systems and their main services (scheduling, memory, privileges, etc.) for embedded systems
- The advantages and disadvantages of the different computer architectures used for embedded systems
- The elements impacting the performance (computation, energy consumption, etc.) of a computer architecture and the methods to optimize them.

The student will be able to:

- Choose a network technology that meets the needs of an embedded system,
- Set up the support network of an embedded system,
- Deploy an operating system on an embedded architecture,
- Develop a driver within an operating system,
- Compare two embedded computer architectures in terms of performance,
- Choose a computer architecture adapted to the needs of an application.

Necessary prerequisites

C programming, computer organization, network, operating system

Practical info

Location(s)

 Toulouse