

DSP



Component

École Nationale
Supérieure
d'Électrotechnique
d'Électronique
d'Informatique
d'Hydraulique
et des
Télécommunications

In brief

- > **Ametys Code:** N8EE03D
- > **Open to exchange students:** Yes

Presentation

Objectives

- Understand the architecture and specifications of a DSP compared to a conventional microcontroller.
- Master programming tools and languages.
- Understand the need for code optimization for implementation on embedded targets.

Description

This course is divided into two parts: Lectures and Practical Work. The lectures will cover the role of a Digital Signal Processor (DSP) within the signal processing chain. Students will then learn about the specific hardware and software features of a DSP. The final part of the course is dedicated to the different programming languages used for a DSP (C and Assembler). The practical work part is divided into four 3.5-hour sessions. The first part is dedicated to mastering the development software. In the second part, students will have to implement FSK modulation on an embedded target.

Pre-requisites

- C and Assembler languages
- Microcontroller Architecture and Programming