

# Basic Electronic Function Project



## Component

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

## In brief

- > **Ametys Code:** N5AE04C
- > **Open to exchange students:** No

## Presentation

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### Objectives

Know how to use measuring devices.

Know how to size and implement basic operational amplifier circuits.

- Amplification and filtering functions.
- Comparison function.
- Oscillator function.

Know how to choose an active component for a specific application and how to identify the technological limitations of a system.

Know how to characterize observed signals in terms of time and frequency: time analysis and spectral analysis

- Definition and measurement of the harmonic distortion ratio of a sinusoidal signal
- measurement of a harmonic distortion ratio

Know how to take experimental readings, present them, and analyze them

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### Description

**Project:**

To design and implement a device to measure the real part and the imaginary part of an impedance.

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## Pre-requisites

Lectures and tutorials: Circuit theory