

# Advanced Amplifier Systems



Component

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



Semester

Printemps

## In brief

- > **Ametys Code:** N6EE03C
- > **Open to exchange students:** Yes

## Presentation

### Objectives

Analysis of the amplification function performed by bipolar transistors as a function of frequency. Study of differential amplifier circuitry.

### Description

- Frequency response of capacitively coupled amplifiers: study at low and high frequencies
- Differential circuits: differential and common mode, symmetrical and asymmetrical output gains, common mode rejection ratio, offset voltage and current, linearity domains in differential and common modes.
- Analysis of the internal structure of an operational amplifier.

### Pre-requisites

Circuit basics; semiconductor physics and PN junctions; transistor amplifier circuits

operational amplifiers and compensation, transistor amplifier circuits