

MOS



Component

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

In brief

- **Ametys Code:** N8AE12A
- **Open to exchange students:** No

Presentation

Objectives

Understand the basic structures of integrated electronics using MOS transistors
Design amplification chains
Understand the principle of amplifier compensation via the Miller effect
Design an amplifier according to specifications

Description

Through this course, 3 parts are covered:

- (1) the fundamental functions achieved using MOS and bipolar transistors;
- (2) the principle of feedback
- (3) the compensation method based on the Miller effect of an amplifier.
- (4) designing a CMOS amplifier (theory, simulation)

Pre-requisites

Basic circuits

Operational amplifier and compensation

Semiconductor and PN junction physics

Signal transistors and power components

Transistor amplifier circuits