

Static Converter Design Project



Component

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

In brief

- > **Ametys Code:** N7EE02B
- > **Open to exchange students:** Yes

Presentation

Objectives

Distinguish between degrees of freedom for directly controlling power transfer and those for improving electrical energy quality or efficiency (these two criteria are often conflicting).

Description

For the main basic converter topologies (AC-DC, DC-DC, DC-AC), this will involve:

- 1- Implementing power transfer in converters,
 - 2- Evaluating waveform quality and sizing input and output filters,
 - 2- Quantitatively evaluating losses in power converters.
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Pre-requisites

Principles of operation of basic topologies (AC-DC, DC-DC, DC-AC)

(Typically: N6EE04D, N6EE06B, N7EE02A)