

# Electrical energy transmission network



## Component

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

## In brief

- > **Amety's Code:** N7EE04C
- > **Open to exchange students:** Yes

## Presentation

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### Objectives

Acquire basic knowledge of alternating current electrical power transmission networks

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### Description

This course presents the operating principles of alternating current electrical power transmission networks and the modeling of the components of these networks. It covers the following topics:

- Architecture of a meshed electricity transmission and distribution network.
  - Modeling of network components: generators, transformers, lines
  - Voltage and reactive power control
  - Frequency control.
  - Calculation of an asymmetrical fault current using the symmetrical components method.
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### Pre-requisites

Basic knowledge of electrical circuits operating in sinusoidal alternating current mode. Understanding of three-phase electrical circuits