

Electrical energy technology



Component

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

In brief

- **Amety's Code:** N7EE04B
- **Open to exchange students:** Yes

Presentation

Objectives

Study the technology of electricity generation, transmission, and distribution networks. Size the components of a high-voltage network and a low-voltage network through case studies.

Description

Electricity generation: Electromechanical technology used, unit and available power, average start-up time, hydroelectric generation: hydraulic turbine technologies used, thermal generation, nuclear thermal generation, overview and functional diagram.

Transmission network: overview and functional diagram, substation technology, functions, line technology, insulation, overhead and underground cable technology.

Distribution network: overview and functional diagram, substation, feeder technology, (external) technology of HV-LV transformers and LV lines.

Pre-requisites

General relationships in single-phase and three-phase electrical engineering