

Optimal control



Component
École Nationale
Supérieure
d'Électrotechnique
d'Électronique

In brief

- **Ametys Code:** N9EE27B
- **Open to exchange students:** Yes

Presentation

Objectives

The 'Optimal Control' course aims to provide students with an in-depth understanding of advanced control strategies applied to electrical machines. Students will learn how to design optimal control algorithms aimed at improving machine performance in terms of efficiency, accuracy and dynamics. Emphasis will be placed on robust control methods, as well as the use of techniques such as vector control, predictive control and model-based control. Students will also explore the challenges of integrating these techniques into complex industrial systems, while taking into account practical constraints such as power limitations and external disturbances. Finally, case studies and simulations will allow students to apply theoretical concepts to real-world projects, thereby consolidating their ability to design and optimise control systems for modern electrical machines.