EE-365

Power electronics

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Cursus	Sem.	Type
Electrical and Electronical Engineering	BA6	Obl.
HES - EL	E	Opt.

Language of teaching	English
Credits	3
Session	Summer
Semester	Spring
Exam	Written
Workload	90h
Weeks	14
Hours	**3 weekly**
Courses	2 weekly
Exercises	1 weekly
Number of positions	

Summary

The basic applications of power electronic systems will be presented, and the relationship between the application and converter structure and circuit will be set in evidence.

Content

- Applications in the field of electrical drives with variable speed
- Applications in the field of classical energy production and transport, compensation of reactive power and power filtering.
- Applications in the field of renewable electrical energy
- Applications in electrical traction

Learning Prerequisites

Required courses

Energy conversion

Learning Outcomes

By the end of the course, the student must be able to:

- Understand a power electronics system
- Understand the operation of power electronics applications

Assessment methods

Written

Resources

Bibliography

Duplicated documents, duplicated lecture notes
Book "Convertisseur statique", H. Bühler

Ressources en bibliothèque

- Convertisseur statique / Bühler