

Course

EEV - Electrical Power Distribution

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^ General information

Long name	Electrical Power Distribution
Approving CModule	<u>EEV_BaET</u>
Responsible	Prof. Dr. Eberhard Waffenschmidt Professor Fakultät IME
Level	Bachelor
Semester in the year	winter semester
Duration	Semester
Hours in self-study	60
ECTS	5
Professors	Prof. Dr. Eberhard Waffenschmidt Professor Fakultät IME
Requirements	- Analysis of electrical Networks - Alternating current calculation using complex numbers - Apparent and reactive power - symmetrical three phase systems
Language	German
Separate final exam	Yes

Final exam

Details

the exam consists of three parts A, B, C:

- Part A ask for basic skills (knowledge and simple application)
- Part B ask for required skills (application and evaluation)
- Part C asks for extended skills (creativity and combination of the acquired knowledge)

Minimum standard

grade 4.0

Exam Type

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^ Lecture / Exercises

Learning goals

Knowledge

- Recognize and name grid structures and components and knowing their benefits
- Apply line properties and consider them for calculations.
- Calculate Currents and Voltages on lines.
- Calculate symmetrical and asymmetrical three phase systems.
- Evaluate the grid connection of generators (e.g. PV-systems) and load.
- Calculate short-circuit currents and dimension safety components.
- Knowledge of the grid control and calculation of the reaction due to load steps.

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Lecture	2
Exercises (whole course)	2
Exercises (shared course)	0
Tutorial (voluntary)	0

Separate exam

none

^ Practical training

Learning goals

Knowledge

- Measurement of wave properties of lines
- Simulation of load flows
- Switching and measurement of load flows

Expenditure classroom teaching

Type	Attendance (h/Wk.)
Practical training	1
Tutorial (voluntary)	0

Separate exam

Exam Type

working on practical scenarion (e.g. in a lab)

Details

- Final discussion after each lab date
- Writing of lab reports

Minimum standard

Succesful participation of the lab courses