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| *Course title* | *Electric Power Systems* |
| *Course code* | *IP 413* |
| *Module coordinator* | *Miriam Heinrich* |
| *Lecturer* | *Prof. Guntram Schultz* |
| *Level of course* | *Bachelor, second year* |
| *Recommended prerequisites* | *Complex numbers, laws of Ohm and Kirchhoff, electric and magnetic fields, basics of dc-, ac-, and three-phase circuits* |
| *Type of course* | *Lecture* |
| *Weekly lecture hours (SWS)* | *2* |
| *ECTS credits* | *2* |
| *Workload* | *In total 60h, 30 h course attendance, 30h self-study* |
| *Assessment (grading; pass/fail)* | *graded* |
| *Regular cycle* | *Each semester* |
| *Language of instruction* | *English* |
| *Contents:* | *The module provides the foundations of power system design and analysis as well as practical knowledge of their components.*<br>*Contents: generators, transformers, overhead lines and cables (ac and dc), switchgear, grid protection, loads and compensation units, case studies.* |
| *Learning outcome (competencies):* | *After having successfully completed the course, the students should*<br>• *Be able to analyse electric grids with the help of mathematical tools*<br>• *Be able to design smaller electric grids including the necessary protection devices* |
| *Teaching methods* | *☒Lecture ☐Group work*<br>*☒Exercises ☐Simulation*<br>*☐Video feedback ☐Others:* |
| *Assessment methods* | *Written Exam, Presentation* |
| *Recommended reading* | *Glover D. Sarma M.: Power System Analysis and Design. Books/Cole (USA)*<br>*Flosdorff R., Hilgarth G.: Elektrische Energieverteilung. Hanser Verlag.* |
| *Additional information* | |
| *Recognition of credits* | |