Module name	**Electrical Power Engineering**
Module number	EuI-ET-C-EET, EuI-MT-C-EET, EuI-RES-C-EET
Lecturer in charge	Prof. Dr.-Ing. habil. Martin Wolter martin.wolter@tu-dresden.de
Objectives	After completing the module, students will be able to carry out basic calculations and measurements for simple three-phase systems. They are familiar with the principles of protective measures in electrical networks. They will be able to calculate simple insulation arrangements. They are familiar with the basic functions of power electronic circuits, electrical machines and three-phase transformers.
Contents	The module covers the generation, conversion, transportation, distribution and application of electrical energy, the structure of electrical energy supply, the fundamentals of three-phase technology and its mathematical description, electrical safety and the coordination of stress and strength as well as the fundamentals of power electronics and electromechanical energy converters.
Modes of teaching and learning	3 hours per week lectures, 1 hour per week exercises, 1 hour per week practical lab courses and self-study.
Prerequisites	The skills to be acquired in the modules **Basics of Electrical Engineering** and **Physics** are required.
Usability	The module is a compulsory module in the basic studies of the degree programmes Electrical Engineering, Mechatronics and Renewable Energy Systems. It creates the prerequisites for the modules that list that module in the "Prerequisites" field.
Requirements for the award of credit points	The credit points are awarded when the module assessment is passed. The module assessment consists of a written exam of 150 minutes and a complex assignment of 15 hours. Both written exam as well as complex assignment have to be passed.
Credit points and grades	5 credit points can be obtained by the module. The module grade is the weighted mean of the grades of the assessments. The written exam is weighted by 1/3 and the complex assignment 2/3.
Frequency	The module is offered every academic year beginning in the winter semester.
Workload	The total effort is 150 hours.
Duration	The module takes two semesters.