

Module Name	High Voltage and High Current Engineering
Module Number	Eul-ET-C-HSHS
Responsible Lecturer	Prof. Dr.-Ing. Maria Kosse maria.kosse@tu-dresden.de
Qualification Objectives	After completing the module, students are able to understand the operational behavior of components in electrical energy supply systems and assess their strength against stress using appropriate measurement methods and tests. They are capable of describing the physical principles of solid, liquid, and gaseous insulating materials, as well as the relationships in the field of lightning protection technology, the heating of current-carrying conductors, and the contact and long-term behavior of current-carrying connections.
Contents	The module covers the fundamentals and principles of high voltage and insulation technology, current-carrying capacity, and the heating of equipment. Additional topics include the construction of test facilities and the contact-physical principles of connection technology.
Teaching and Learning Forms	2 hours per week of lectures, 1 hour per week of exercises, 2 hours per week of practical lab courses, and self-study.
Prerequisites for Participation	The competencies to be acquired in the modules Basics of Electrical Engineering and Physics are required.
Usability	The module is a compulsory module of the main study program in the field of Electrical Power Engineering in the diploma program Electrical Engineering. It creates the prerequisites for the modules that list this module in the field "Prerequisites for Participation."
Prerequisites for the Award of Credit Points	Credit points are awarded when the module examination is passed. The module examination consists of a written exam lasting 120 minutes and a complex assignment with a workload of 60 hours.
Credit Points and Grades	7 credit points can be earned through the module. The module grade is determined by the weighted average of the grades of the examination components. The written exam is weighted sixfold, and the complex assignment is weighted fourfold.
Frequency of the Module	The module is offered every academic year, starting in the winter semester.
Workload	The total workload is 210 hours.
Duration of the Module	The module lasts two semesters.