

Module Name	Experimental High Voltage and High Current Engineering
Module Number	Eul-ET-E-eHSHS, Eul-RES-E-eHSHS
Responsible Lecturer	Prof. Dr.-Ing. Maria Kosse maria.kosse@tu-dresden.de
Qualification Objectives	Students are able to scientifically plan, conduct, and statistically evaluate experiments in the field of high voltage and high current technology. Furthermore, they are capable of selecting and applying test facilities and measurement systems for high voltage and high current experiments in a task-oriented manner and assessing their operational and transmission behavior. Additionally, they are able to select testing and diagnostic procedures for equipment used in electrical power supply systems. They possess both substantive and methodological knowledge for scientific work in this field.
Contents	The module covers testing and measurement technology for high voltages and currents as well as scientific methods for planning and statistically evaluating experiments. This includes: - Test facilities for generating high voltages and currents, - Systems for recording measurement variables, - Methods for determining and evaluating measurement variables, and - Procedures for testing and diagnosing equipment.
Teaching and Learning Forms	4 hours per week of lectures, 2 hours per week of practical exercises, and self-study.
Prerequisites for Participation	In the diploma program Electrical Engineering, the competencies to be acquired in the module High Voltage and High Current Engineering are required. In the diploma program Renewable Energy Systems, the competencies to be acquired in the module High Voltage and High Current Engineering Basics are also required.
Usability	The module is an elective module from the elective area "Competence Deepening" according to § 6 paragraph 3 SO and § 33 paragraph 4 PO of the main study program in the field of Electrical Power Engineering in the diploma program Electrical Engineering. It is also an elective module from the elective area "Competence Deepening" according to § 6 paragraph 3 SO and § 33 paragraph 3 PO of the main study program in the diploma program Renewable Energy Systems. 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 non-public oral examination as an individual examination lasting 45 minutes and a complex assignment with a workload of 100 hours.
Credit Points and Grades	7 credit points can be earned through the module. The module grade is determined by the unweighted average of the grades of the examination components.
Frequency of the Module	The module is offered every winter semester.
Workload	The total workload is 210 hours.
Duration of the Module	The module lasts one semester.