

Module Name	Electric Drives
Module Number	Eul-ET-C-EA, Eul-RES-E-EA
Responsible Lecturer	Prof. Dr.-Ing. Matthias Centner matthias.centner@tu-dresden.de
Qualification Objectives	After completing the module, students are able to understand the operating behavior of electrical drives using equivalent circuit diagrams and to evaluate the control and regulation properties through appropriate calculations, measurements, and tests.
Contents	The module covers electrical drives with a focus on the fundamentals of electromechanical drives, speed and torque control of DC and AC drives using power electronic actuators, as well as the control of electrical drives.
Teaching and Learning Forms	3 hours per week of lectures, 1 hour per week of exercises, 1 hour per week of practical lab courses, and self-study.
Prerequisites for Participation	The competencies to be acquired in the modules Basics of Electrical Engineering, Physics, and Electrical Power Engineering are required.
Usability	The module is a compulsory module in the main study program of the specialization Electrical Power Engineering in the diploma program Electrical Engineering and an elective module in 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 written exam lasting 180 minutes and a complex assignment with a workload of 30 hours.
Credit Points and Grades	6 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 sevenfold, and the complex assignment is weighted threefold.
Frequency of the Module	The module is offered every summer semester.
Workload	The total workload is 180 hours.
Duration of the Module	The module lasts one semester.