

Module name	Basics of Electrical Engineering
Module number	Eul-ET-C-GET, Eul-BMT-C-GET, Eul-IST-C-GET, Eul-MT-C-GET, Eul-RES-C-GET
Lecturer in charge	Prof. Dr. phil. nat. habil. Ronald Tetzlaff ronald.tetzlaff@tu-dresden.de
Objectives	After completing the module, students have basic knowledge of electrical engineering and electronics and have mastered methods for solving electrical engineering problems as a basis for further modules. The focus is on resistive circuits. They are able to describe linear and non-linear two-pole circuits and take into account the temperature dependence of their parameters, systematically analyze electrical circuits with direct current and apply special simplified analysis methods such as two-pole theory and the superposition theorem. They can calculate the power conversion in circuits and analyze and measure thermal arrangements.
Contents	The content of the module is the calculation of electrical networks with direct current.
Modes of teaching and learning	2 hours per week lectures, 2 hours per week exercises and self-study.
Prerequisites	Knowledge of mathematics and physics at basic A-level is required.
Usability	The module is a compulsory module in the basic studies of the degree programmes Electrical Engineering, Biomedical Engineering, Information Systems 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.
Credit points and grades	5 credit points can be obtained by the module. The module grade is the grade of the examination.
Frequency	The module is offered every winter semester.
Workload	The total effort is 150 hours.
Duration	The module takes one semester.