

Module Name	Engineering Mechanics
Module Number	Eul-RES-C-TM, Eul-BMT-C-TM, Eul-MT-C-TM, Eul-ET-E-TM
Responsible Lecturer	Prof. Dr.-Ing. habil. Thomas Wallmersperger thomas.wallmersperger@tu-dresden.de
Qualification Objectives	After completing the module, students possess knowledge of the fundamental laws of statics as well as the simplified relationships between loads, material properties, and stresses in components. They master the corresponding calculation methods for dimensioning and strength evaluation.
Contents	The module covers rigid bodies, independent loads, force and moment, the section principle, force and moment balances of planar structures, tensile, compressive, and shear stresses including elementary dimensioning concepts, torsion of rods with circular cross-sections, straight bending of prismatic beams, strength hypotheses, and buckling of rods.
Teaching and Learning Forms	2 hours per week of lectures, 2 hours per week of exercises, and self-study.
Prerequisites for Participation	The competencies to be acquired in the module " Introduction to Analysis and Algebra" are required. Additionally, knowledge of mathematics and physics at the basic high school level is expected.
Usability	The module is a compulsory module in the basic studies of the diploma programs in Renewable Energy Systems, Biomedical Engineering, and Mechatronics. Furthermore, it is one of two elective compulsory modules in the specialization "Electrical Power Engineering" in the diploma program Electrical Engineering, of which one must be chosen. 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.
Credit Points and Grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination performance.
Frequency of the Module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the Module	The module lasts one semester.