

Module name	Engineering Mechanics
Module number	EuI-MT-C-TM, EuI-BMT-C-TM, EuI-ET-E-TM, EuI-RES-C-TM
Lecturer in charge	Prof. Dr.-Ing. habil. Thomas Wallmersperger thomas.wallmersperger@tu-dresden.de
Objectives	After completing the module, students will have knowledge of the basic laws of statics and the simplified relationships between loads, material properties and stresses on components. They will have mastered the relevant calculation methods for dimensioning and strength assessment.
Contents	Contents of the module are rigid bodies, independent loads, force and moment, principle of section, balances of forces and moments of plane structures, tensile, compressive and shear stresses including elementary dimensioning concepts as well as torsion of beams with circular cross-sections, straight bending of prismatic beams, strength hypotheses and beam buckling.
Modes of teaching and learning	2 hours per week lectures, two hours per week exercises and self-study.
Prerequisites	The skills to be acquired in the module Introduction to Analysis and Algebra are required. Further, 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 Biomedical Engineering, Mechatronics and Renewable Energy Systems. Further, it is one of two compulsory elective modules in the field of Electrical Power Engineering in the degree programme Electrical Engineering, of which one must be selected. 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 120 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 summer semester.
Workload	The total effort is 150 hours.
Duration	The module takes one semester.