

Module Name	Simulation and Experimental Studies of Combustion Engines
Module Number	Eul-MT-E-A03G
Responsible Lecturer	Prof. Dr. Frank Atzler frank.atzler@tu-dresden.de>
Qualification Objectives	Students master the theoretical and practical fundamentals for the calculation of CO ₂ -neutral internal combustion engines and drive systems, as well as methods for analyzing and solving engineering problems in experimental settings.
Contents	The module covers the theoretical fundamentals for the calculation of drive systems in general and internal combustion engines, including relevant components, in particular.
Teaching and Learning Forms	2 hours per week of lectures, 2 hours per week of seminars, and self-study.
Prerequisites for Participation	The competencies to be acquired in the modules Basics of Electrical Engineering, Physics, Technical Mechanics, Fundamentals of Kinematics and Kinetics, Materials, and Design Methodologie are required.
Usability	The module is an elective module from the elective area "Methods and Applications" according to § 6 paragraph 3 SO and § 33 paragraph 3 PO of the main study program in the diploma program Mechatronics. 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 240 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.