

Module Name	Technical Acoustics/ Vehicle Acoustics
Module Number	Eul-ET-E-TeAku
Responsible Lecturer	Prof. Dr.-Ing. habil. Ercan Altinsoy ercan.altinsoy@tu-dresden.de
Qualification Objectives	After completing the module, students are familiar with methods for acoustic product development, such as the design of sound absorbers and dampers in the automotive industry or vibration isolation for machinery. They are capable of conducting sound and vibration measurements and analyzing the generation, transmission, and insulation of airborne and structure-borne sound. The acquired measurement, calculation, and simulation methods enable students to estimate the generation and radiation of structure-borne sound and to develop low-noise machinery.
Contents	The module covers Technical Acoustics, Vehicle Acoustics, and Sound and Vibration Measurement Technology, particularly the generation, transmission, and insulation of airborne and structure-borne sound, transfer path analysis and synthesis, as well as targeted sound design for motor vehicles. Additional topics include elastic mounting, active noise control, and acoustic finite elements.
Teaching and Learning Forms	4 hours per week of lectures, 1 hour per week of practical exercises, and self-study.
Prerequisites for Participation	The competencies acquired in the module "Acoustics" are required. Alternatively, competencies from the following literature are expected: *Acoustics for Engineers* by Prof. Jens Blauert and Prof. Ning Xiang, Springer-Verlag, 2009.
Usability	The module is an elective module within the elective area "Competence Deepening" according to § 6 paragraph 3 SO and § 33 paragraph 4 PO of the main study program in the field of Information Technology in the diploma program Electrical Engineering. It creates the prerequisites for 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 non-public oral examination as an individual examination lasting 30 minutes.
Credit Points and Grades	7 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 winter semester.
Workload	The total workload is 210 hours.
Duration of the Module	The module lasts one semester.