

Module Name	Electro-Acoustics
Module Number	Eul-ET-E-ELAK
Responsible Lecturer	Prof. Dr.-Ing. habil. Ercan Altinsoy ercan.altinsoy@tu-dresden.de
Qualification Objectives	After completing the module, students are able to integratively apply the knowledge acquired from various fields of electrical engineering, mechanics, and acoustics to complex structures – nonlinear, time-variant, and with distributed parameters. A typical example is the evaluation of sound reproduction systems using objective measurements. Students master the development of new measurement methods to evaluate electroacoustic systems both with special test signals and with music. They understand the relationship between measured symptoms and physical causes as well as their effects on perceived sound quality. Furthermore, they master advanced methods for modeling and analyzing electrical, mechanical, and acoustic systems, as well as the systematic design of measurement and control devices that can be implemented using digital signal processors.
Contents	The module focuses on electroacoustics, with an emphasis on the evaluation of audio systems and the active control of sound and vibrations.
Teaching and Learning Forms	4 hours per week of lectures, 2 hours per week of practical lab courses, and self-study. The language of instruction for the lectures is English. The language of instruction for the practical lab courses is German.
Prerequisites for Participation	The competencies to be acquired in the modules Signal Theory and Acoustics are required.
Usability	The module is an elective module from the elective area "Competence Deepening" according to § 6 paragraph 3 of the Study Regulations (SO) and § 33 paragraph 4 of the Examination Regulations (PO) of the main study program in the field of Information Technology in the diploma program Electrical Engineering. 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 90 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 summer semester.
Workload	The total workload is 210 hours.
Duration of the Module	The module lasts one semester.