

Module Name	Room Acoustics/ Virtual Reality
Module Number	Eul-ET-E-RaVR, Eul-IST-E-RaVR
Responsible Lecturer	Prof. Dr.-Ing. habil. Ercan Altinsoy ercan.altinsoy@tu-dresden.de
Qualification Objectives	After completing the module, students have the competence to design room and electroacoustics, for example, simulators in the automotive industry, the telecommunications sector, medicine, or the entertainment industry.
Contents	The module covers room acoustics, such as the optimization of speech and music transmission in rooms, acoustic material properties, sound reinforcement technology, room acoustic planning, as well as virtual reality, including audio recording and playback technologies such as binaural techniques, stereophony, ambisonics, WFS, implementation of room acoustic models, sound synthesis methods, and haptic and visual playback technologies.
Teaching and Learning Forms	4 hours per week of lectures, 2 hours per week of practical lab courses, and self-study.
Prerequisites for Participation	The competencies to be acquired in the module Basics of Electrical Engineering are required. Alternatively, competencies from the following literature are required: *Acoustics for Engineers* by Prof. Jens Blauert and Prof. Ning Xiang, Springer-Verlag, 2009.
Usability	The module is an elective module in the elective area "Competence Deepening" according to § 6 paragraph 3 of the study regulations and § 33 paragraph 4 of the examination regulations of the main study program in the field of Information Technology in the diploma program Electrical Engineering. Furthermore, it is an elective module in the elective area "Competence Deepening" according to § 6 paragraph 3 of the study regulations and § 33 paragraph 3 of the examination regulations of the main study program in the field of Communication Technology in the diploma program Information Systems Engineering. The module creates the prerequisites for the modules that list it under "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 complex performance task with a workload of 90 hours.
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.