

Module Name	Speech Technology
Module Number	Eul-ET-E-SprTe, Eul-IST-E-SprTe
Responsible Lecturer	Prof. Dr.-Ing. Peter Birkholz peter.birkholz@tu-dresden.de
Qualification Objectives	After completing the module, students master the current technologies applied in speech recognition and speech synthesis. They are familiar with the basic concepts of phonetics, the notation system, and the structures of natural language. They understand the fundamentals of speech production as well as the articulatory and acoustic realization of sound classes. They are proficient in the basic techniques for signal analysis and classification in speech recognition as well as in various approaches to speech synthesis.
Contents	The module covers the algorithms and methods of automatic speech recognition and speech synthesis.
Teaching and Learning Forms	2 hours per week of lectures, 2 hours per week of practical lab courses, and self-study.
Prerequisites for Participation	In the diploma program Electrical Engineering, the competencies acquired in the module Signal Theory are required. In the diploma program Information Systems Engineering, the competencies acquired in the module Signal Processing are required.
Usability	The module is an elective module in 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. Furthermore, it is an elective module in the elective area "Competence Deepening" according to § 6 paragraph 3 SO and § 33 paragraph 3 PO of the main study program in the field of Communication Technology in the diploma program Information Systems 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 120 minutes. For up to 15 registered students, the written exam is replaced by a non-public oral examination as an individual exam lasting 25 minutes. If applicable, this will be announced to the registered students at the end of the registration period in the usual manner. A bonus achievement for the written exam or oral examination is a practical performance review with a scope of 15 hours.
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 winter semester.
Workload	The total workload is 150 hours.
Duration of the Module	The module lasts one semester.