

Module Name	High and Very High Frequency Technology
Module Number	Eul-ET-C-HoHFT
Responsible Lecturer	Prof. Dr.-Ing. Dirk Plettemeier dirk.plettemeier@tu-dresden.de
Qualification Objectives	After completing the module, students are able to calculate high-frequency connections and dimension waveguides. They are proficient in handling high-frequency equivalent circuits and the scattering parameter description of n-ports. Students can confidently apply the fundamental laws of radiation, propagation, and reflection of electromagnetic waves and possess basic knowledge regarding signal transmission using various waveguide structures.
Contents	The module covers the physical fundamentals of components, circuits, and systems in high-frequency technology and radio transmission. This includes the theory and practice of high-frequency waveguides such as microstrip lines, hollow waveguides, and optical waveguides, as well as the associated components and circuits, and their description using scattering parameters.
Teaching and Learning Forms	2 hours per week of lectures, 2 hours per week of exercises, and self-study.
Prerequisites for Participation	The competencies to be acquired in the first semester of the module Electromagnetic Theory are required.
Usability	The module is a compulsory module 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 180 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.