

Module Name	Human-Machine System Technology
Module Number	Eul-ET-E-MMST, Eul-IST-E-MMST, Eul-MT-E-MMST
Responsible Lecturer	Prof. Dr.-Ing. habil. Leon Urbas leon.urbas@tu-dresden.de
Qualification Objectives	After completing the module, students master fundamental methods of human-machine systems engineering for the description, analysis, evaluation, and design of dynamic interactive systems. Furthermore, they are capable of systematically addressing domain-specific questions of human-machine interaction in teams by applying the acquired methodological competence.
Contents	The module covers principles and methods of human-machine systems engineering, focusing on the consideration of the human factor in the analysis, evaluation, and design of complex, interactive technical systems.
Teaching and Learning Forms	2 hours per week of lectures, 2 hours per week of projects, and self-study.
Prerequisites for Participation	The competencies to be acquired in the module "Systems Theory" 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 Automation Technology and Robotics 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 Automation, Sensors, and Robotics in the diploma program Information Systems Engineering. Additionally, it is an elective module in the elective area "Methods and Applications" according to § 6 paragraph 3 SO and § 33 paragraph 3 PO of the main study program in the diploma program Mechatronics. 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 portfolio with a total workload of 16 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.