

Module Name	Process Identification
Module Number	Eul-ET-C-PRID, Eul-IST-E-PRID, Eul-MT-E-PRID
Responsible Lecturer	Prof. Dr.-Ing. habil. Klaus Röbenack klaus.roebenack@tu-dresden.de
Qualification Objectives	After completing the module, students are able to identify the parameters of static models as well as dynamic time-discrete and time-continuous models. They are familiar with the basic model structures required for process identification and master the fundamentals of correlation and spectral analysis. They are capable of handling complex system models using methods of scientific computing.
Contents	The module covers: - Methods for parameter identification for static and dynamic system models, < - Knowledge transfer on model structures for process identification, - Elements of correlation and spectral analysis, and - Automatic differentiation
Teaching and Learning Forms	2 hours per week of lectures, 2 hours per week of exercises, and self-study.
Prerequisites for Participation	In the diploma program in Electrical Engineering, the competencies to be acquired in the module "Control Engineering" are required. In the diploma programs in Information Systems Engineering and Mechatronics, the basic knowledge to be acquired in the module "Control Engineering Basics" is required.
Usability	The module is a compulsory module in the main study program of the specialization 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 2 SO and § 33 paragraph 3 PO of the field 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 2 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 written exam lasting 120 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.