

Module Name	Modular Automation
Module Number	Eul-ET-E-ModA, Eul-IST-E-ModA
Responsible Lecturer	Prof. Dr.-Ing. habil. Leon Urbas leon.urbas@tu-dresden.de
Qualification Objectives	After completing the module, students are familiar with the description tools, methods, and tools for planning, designing, and implementing distributed and networked modular production plants in the process industry. They can apply this specialized knowledge to solve specific practical problems and scientific questions in this research field.
Contents	The module covers the principles, models, and methods for orchestrating and implementing modular production and automation systems that are suitable for realizing process engineering operations in a flexible, efficient, and safe manner.
Teaching and Learning Forms	1 hour per week of lectures, 1 hour per week of exercises, 2 hours per week of projects, and self-study.
Prerequisites for Participation	The competencies to be acquired in the module Automation Engineering are required.
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 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 of the study regulations and § 33 paragraph 3 of the examination regulations of the main study program in the field of Automation, Sensor Technology, and Robotics 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 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.