Module Name	Quality Assurance
Module Number	EuI-ET-C-QuaSi
Responsible Lecturer	Prof. Dr.-Ing. habil. Thomas Zerna thomas.zerna@tu-dresden.de
Qualification Objectives	After completing the module, students are capable of efficiently ensuring product quality during the design, development, and manufacturing of assemblies and devices by applying modern methods of quality assurance, particularly statistical process control (SPC). They are able to evaluate, select, and actively apply methods for quality assurance in electrical engineering.
Contents	The module covers tasks and concepts of quality assurance and quality management. It includes the description of discrete and continuous quality characteristics, their parameters and key distributions, the collection, evaluation, and presentation of quality data, statistical verification of quality characteristics, quality control charts, acceptance sampling inspections, analysis and calculation of reliability data, machine and process capability indices, relationships between quality characteristics/regression analyses, and quality standards.
Teaching and Learning Forms	2 hours per week of lectures, 1 hour per week of exercises, and self-study.
Prerequisites for Participation	The competencies to be acquired in the modules Introduction to Analysis and Algebra, Partial Differential Equations and Probability Theory, as well as Electronics Technology Lab, are required.
Usability	The module is a compulsory module of the main study program in the field of Electronic Systems, Micro and Medical 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 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.