

Module Name	Fundamentals of Energy Storage
Module Number	Eul-RES-E-GENSp
Responsible Lecturer	Prof. Dr.-Ing. T. Bocklisch thilo.bocklisch@tu-dresden.de
Qualification Objectives	After completing the module, students understand the fundamental properties of various energy storage systems and are familiar with criteria for their comparative evaluation. They are able to select and dimension energy storage systems for different applications, such as short-term or long-term storage. In addition to technical assessment, they are also acquainted with the economic and ecological aspects of storage systems.
Contents	The module covers thermal and mechanical energy storage, compressed air storage systems, as well as electrical and electrochemical storage systems.
Teaching and Learning Forms	4 hours per week of lectures, 2 hours per week of exercises, and self-study.
Prerequisites for Participation	The competencies to be acquired in the modules Physics, Thermodynamics Basics, and Heat Transfer are required.
Usability	The module is an elective module from the elective area "Competence Deepening" in accordance with § 6 paragraph 3 SO and § 33 paragraph 3 PO in the main study phase of the diploma program Renewable Energy Systems.
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. For up to 5 participants, the written exam is replaced by a non-public oral examination as an individual exam lasting 45 minutes. If applicable, this will be announced to the registered students at the end of the registration period in the usual manner.
Credit Points and Grades	7 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 210 hours.
Duration of the Module	The module lasts one semester.