

Module Name	Demand Response
Module Number	Eul-RES-E-LMGMT
Responsible Lecturer	Prof. Dr.-Ing. C. Felsmann clemens.felsmann@tu-dresden.de
Qualification Objectives	Students acquire the ability to determine energy demand and energy performance indicators based on specific load profiles of buildings and industrial processes, taking into account the respective supply structures and usage requirements. They are familiar with the methods and potentials of load management, considering selected storage technologies, and possess knowledge for evaluating energy efficiency in energy usage.
Contents	The module covers the characteristics of thermal and electrical load profiles as well as the heat, cooling, and electricity demand of buildings and industrial processes. Dependencies between temporal load requirements and various influencing factors are analyzed.
Teaching and Learning Forms	3 hours per week of lectures, 3 hours per week of exercises, and self-study.
Prerequisites for Participation	The competencies to be acquired in the modules Heat Transfer, Electrical Power Engineering, Fundamentals of Refrigeration, Air Conditioning and Heat Pumps, Fundamentals of Power Machinery, and Renewable Energy Systems Advanced are required.
Usability	The module is an elective module from the elective area "Competence Deepening" according to § 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. If more than 5 students are registered for the examination, it consists of a written exam lasting 180 minutes. If up to 5 students are registered, the written exam is replaced by a non-public oral examination as an individual exam lasting 60 minutes. This will be communicated to the registered students at the end of the registration period in the usual manner. A bonus for the written exam can be earned by completing an exercise task with a workload of 20 hours.
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 winter semester.
Workload	The total workload is 210 hours.
Duration of the Module	The module lasts one semester.