

Module Name	Renewable Energy Systems Advanced
Module Number	Eul-RES-C-RESV
Responsible Lecturer	Prof. Dr.-Ing. C. Felsmann clemens.felsmann@tu-dresden.de
Qualification Objectives	After completing the module, students possess advanced knowledge of the design, application, and evaluation of regenerative energy systems, including circuits, plant technology, and operation, as well as insights into the practical implementation of regenerative energy systems.
Contents	The module focuses on the integration of regenerative energy sources into overarching energy systems. This includes general and advanced questions of constructive plant design, the technical and economic challenges of design, evaluation, and operation of plants for the utilization of regenerative energy sources. Particular emphasis is placed on the combination with conventional energy systems based on fossil fuels.
Teaching and Learning Forms	2 hours per week of lectures, 1 hour per week of exercises, 1 hour per week of seminars, 1 hour per week of practical lab courses, and self-study.
Prerequisites for Participation	The competencies to be acquired in the module Renewable Energy Systems Basics are required.
Usability	The module is a compulsory module 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 120 minutes. If fewer than 10 participants are registered, the written exam will be replaced by a non-public oral group examination lasting 20 minutes. This will be announced to the registered students at the end of the registration period in the usual manner. A bonus achievement is the preparation of a reflection report with a workload of 10 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 summer semester.
Workload	The total workload is 150 hours.
Duration of the Module	The module lasts one semester.