

Module Name	Energy Economics and Evaluation
Module Number	Eul-RES-E-EWB
Responsible Lecturer	Prof. Dr.-Ing. Clemens Felsmann clemens.felsmann@tu-dresden.de
Qualification Objectives	Students master methodological approaches for the thermodynamic, economic, and ecological balancing and evaluation of energy forms and conversion processes. They are familiar with various methods for the allocation of energy carriers, costs, and emissions in coupled processes, as well as their advantages and disadvantages. Additionally, they are acquainted with the principles of economic efficiency calculations and the cost components to be considered.
Contents	The module includes cost elements and methods of economic efficiency calculations, as well as methods and key figures for the physical-technical balancing and evaluation of fuels, energy flows, subprocesses, and components of energy systems and plants. A key focus is on coupled processes, such as combined heat and power (CHP) and combined heat and cooling processes. The module also involves the use of calculation programs for the analysis and optimization of plant engineering configurations.
Teaching and Learning Forms	2 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 Thermodynamics Basics and Thermodynamics of Processes are required.
Usability	The module is an elective module in the elective area "Orientation" according to § 6 paragraph 3 SO and § 33 paragraph 3 PO in the main study phase of the diploma program Renewable Energy Systems. 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. 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 for the written exam can be earned by completing a research task with a workload of 15 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.