

Module Name	Fundamentals of Fluid Mechanics
Module Number	Eul-RES-C-GStM
Responsible Lecturer	Prof. Dr.-Ing. habil. J. Fröhlich jochen.froehlich@tu-dresden.de
Qualification Objectives	After completing the module, students have a fundamental understanding of the mechanics of gases and fluids. They are capable of analyzing and quantitatively describing simple technical flow configurations.
Contents	The module covers the fundamentals of the mechanics of gases and fluids, conservation laws of classical mechanics in differential and integral form, one-dimensional streamline theory for incompressible and compressible fluids, including its application to technically relevant configurations, as well as laminar and turbulent flows.
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 Introduction to Analysis and Algebra, Multidimensional Differential and Integral Calculus, and Physics are required.
Usability	The module is a compulsory module in the basic 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 150 minutes.
Credit Points and Grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the written exam.
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.