

Module name	Fundamentals of Fluid Mechanics
Module number	Eul-RES-C-GStM
Lecturer in charge	Prof. Dr.-Ing. habil. J. Fröhlich jochen.froehlich@tu-dresden.de
Objectives	After completing the module, students will have a basic understanding of the mechanics of gases and fluids. They will be able to analyze and quantitatively describe 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 flow filament theory for incompressible and compressible fluids including their use for technically relevant configurations as well as laminar and turbulent flows.
Modes of teaching and learning	2 hours per week lectures, 2 hours per week exercises and self-study.
Prerequisites	The skills to be acquired in the module Introduction to Analysis and Algebra, Calculus for Functions with Several Variables and Physics are required.
Usability	The module is a compulsory module in the basic studies of the degree programme Renewable Energy Systems. It creates the prerequisites for the modules that list that module in the "Prerequisites" field.
Requirements for the award of credit points	The credit points are awarded when the module assessment is passed. The module assessment consists of a written exam of 150 minutes.
Credit points and grades	5 credit points can be obtained by the module. The module grade is the grade of the examination.
Frequency	The module is offered every summer semester.
Workload	The total effort is 150 hours.
Duration	The module takes one semester.