

Faculty	Nature and Technology
Course Title	CFD I (Computational Fluid Dynamics)
Number of ECTS credits	6
Hours per week (SWS)	4+2
Semester	Spring, Bachelor 3rd year
Course objective	Introduction into computational fluid dynamics
Prerequisites	Fundamental knowledge in fluid mechanics
Recommended reading	Ferziger JH, Peric M (2002) Computational Methods for Fluid Dynamics. 3rd Edition, Springer, Berlin, Heidelberg
Teaching methods	Blackboard, practical training with computers (Software: openFOAM)
Assessment methods	Presentation of own CFD results (10 min + 5 min discussion) and report (3500 words maximum without appendix)
Language of instruction	English
Name of lecturer	Prof. Dr. Albert Baars
Email	albert.baars@hs-bremen.de
Link	
Course content	Introduction into CFD, fundamental equations of fluid mechanics, finite differences, finite volume, temporal discretization, discretization of Navier-Stokes equation, set up of CFD cases for laminar flows