

Faculty	School of Nature and Engineering (5)
Course Title	Computational Fluid Dynamics I
Number of ECTS credits	6
Hours per week (SWS)	4 + 2
Semester	Spring/summer: Bachelor
Course objective	Introduction in computational fluid dynamics and development of practical skills with the open source software openFOAM
Prerequisites	none
Recommended reading	Ferziger, JH, Perić M, Street RL (2020) Computational Methods for Fluid Mechanics. 4 th edition, Springer Nature, Cham
Teaching methods	Lecture + practical training (openFOAM)
Assessment methods	Presentation + report
Language of instruction	English (on demand)/German
Name of lecturer	Prof. Dr. Albert Baars
Email	albert.baars@hs-bremen.de
Link	
Course content	Governing equations of fluid mechanics, finite differences, finite volumes, temporal discretisation, numerical solutions of Navier-Stokes equations, training of numerical simulations (inner, outer flows), interpretation of results