MODULE HANDBOOK
COMPUTATIONAL FLUID DYNAMICS

MASTER DEGREE PROGRAM
DEPARTMENT OF MATHEMATICS
FACULTY OF SCIENCE AND DATA ANALYTICS
INSTITUT TEKNOLOGI SEPULUH NOPEMBER

MODULE HANDBOOK
COMPUTANTIONAL FLUID DYNAMICS

Module name	**Computational Fluid Dynamics**
Module level	Master
Code	KM185274
Course (if applicable)	-
Semester	Spring (Genap)
Person responsible for the module	
Lecturer	
Language	Bahasa Indonesia and English
Relation to curriculum	Master degree program, **elective**, 2nd semester.
Type of teaching, contact hours	Lectures, <60 students
Workload	1. Lectures : 3 x 50 = 150 minutes per week. 2. Exercises and Assignments : 3 x 60 = 180 minutes (3 hours) per week. 3. Private learning : 3 x 60 = 180 minutes (3 hours) per week.
Credit points	3 credit points (sks)
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to sit in the exams.
Mandatory prerequisites	-
Learning outcomes and their	Course Learning Outcome (CLO) after completing this module, ● Students understand, control and understand the fluid flow equations.

corresponding PLOs	● Students are able to develop the transport scalar equations and momentum. ● Students are able to understand the basic concepts of turbulence
Content	Course computational fluid dynamics is about the computational aspects of fluid dynamics.
Study and examination requirements and forms of examination	● In-class exercises ● Assignment 1, 2, 3 ● Mid-term examination ● Final examination
Media employed	LCD, whiteboard, websites (myITS Classroom), zoom.
Reading list	Main: 1. Anderson, JDJ, 1995, Computational Fluid Dynamics (The Basics with Applications), International Edition, McGraw-Hill, New York, USA. Supporting: 1. Anderson, JDJ, 1995, "Computational Fluid Dynamics (The Basics with Applications) '', International Edition, McGraw-Hill, New York, USA. 2. Hoffmann, KA and Chiang, ST, 1995, "Computational Fluid Dynamics For Engineers, Engineering Education System", Wichita, USA. 3. Shames, IH, 1992, "Mechanics of Fluid, 3rd Edition", McGraw-Hill, New York, USA. 4. Welty, JR, et al., 1995, '' Fundamentals of Momentum, Heat and Mass Transfer, 3rd Edition ", John Wiley & Sons, Inc., New York, USA. 5. Wilkes, DJF, et al., 1995, "Fluid Mechanics, 3rd Edition", Longman Publishers Singapore, Singapore.