



# MODULE HANDBOOK MATHEMATICAL MODELING

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

# MODULE HANDBOOK

## MATHEMATICAL MODELING

Module name	<b>Mathematical Modeling</b>
Module level	Postgraduate
Code	KM185103
Course (if applicable)	-
Semester	Fall (Gasal)
Person responsible for the module	
Lecturer	
Language	Bahasa Indonesia and English
Relation to curriculum	Master degree program, <b>mandatory</b> , 1 <sup>st</sup> 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 corresponding PLOs	<p>Course Learning Outcome (CLO) after completing this module,</p> <ul style="list-style-type: none"> <li>• Students are able to solve mathematical problems by applying fundamental mathematical statements, methods, and computations.</li> <li>• Students are able to analyze mathematical problems in one of the fields: analysis, algebra, modeling, system, optimization or computing sciences</li> <li>• Students are able to work and research collaboratively on mathematical problems within either the area of pure mathematics or applied mathematics or computing sciences</li> </ul>
Content	
Study and examination requirements and forms of examination	<ul style="list-style-type: none"> <li>• In-class exercises</li> <li>• Assignment 1, 2, 3</li> <li>• Mid-term examination</li> <li>• Final examination</li> </ul>
Media employed	LCD, whiteboard, websites (myITS Classroom), zoom.
Reading list	<p>Main:</p> <p>-</p> <p>Supporting:</p> <p>-</p>