



MODULE HANDBOOK ORDINARY DIFFERENTIAL EQUATIONS

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

MODULE HANDBOOK

ORDINARY DIFFERENTIAL EQUATIONS

Module name	Ordinary Differential Equations	
Module level	Undergraduate	
Code	KM184401	
Course (if applicable)	Ordinary Differential Equations	
Semester	Spring (Genap)	
Person responsible for the module	Dra. Nur Asiyah, M.Si	
Lecturer	Dra. Nur Asiyah, M.Si	
Language	Indonesia and English	
Relation to curriculum	Undergraduate degree program, mandatory , 4 th 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	Elementary Linear Algebra	
Learning outcomes and their corresponding PLOs	Course Learning Outcome (CLO) after completing this module, CLO-1 Students are able to identify problems with the form of ordinary differential equations and systems of ordinary differential equations. CLO-2 Students are able to apply methods to solve ordinary differential equations and systems of ordinary differential equations. CLO-3 Students are able to analyze the properties and behavior of solving ordinary differential equations systems.	
Content	In this course, students will learn about the various forms of differential equations with 1 (one) independent variable as well as methods for solving differential equations and systems of differential equations, the formality and unification of solutions, properties and behavior of solutions, system stability in the form of linear	

	differential equations. In classroom students will learn and be equipped to understand and to be able to explain the material that being taught according to the teaching material. In addition, students are given assignments that lead to independent study and group work.
Study and examination requirements and forms of examination	<ul style="list-style-type: none"> • In-class exercises • Assignment 1, 2 • Mid-term examination • Final examination
Media employed	LCD, whiteboard, websites (myITS Classroom), zoom.
Reading list	<p>Main:</p> <ol style="list-style-type: none"> 1. Boyce Di Prima, "Ordinary Differential Equation and Boundary Value Problem", 9th edition, 2005 <p>Supporting:</p> <p>-</p>

