



MODULE HANDBOOK ANALYSIS I

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

MODULE HANDBOOK

ANALYSIS I

Module name	Analysis I	
Module level	Undergraduate	
Code	KM184501	
Course (if applicable)	Analysis I	
Semester	Fall (Gasal)	
Person responsible for the module	Dr. Dra. Rinurwati, M.Si ÷	
Lecturer	Dr. Dra. Rinurwati, M.Si ÷ Drs. Sadjidon, M.Si ÷	
Language	Bahasa Indonesia and English	
Relation to curriculum	Undergraduate degree program, mandatory , 5 th semester.	
Type of teaching, contact hours	Lectures, <60 students Tuesdays, 11.00-12.50 (GMT+7)	
Workload	<ol style="list-style-type: none"> 1. Lectures : 4 x 50 = 200 minutes per week. 2. Exercises and Assignments : 4 x 60 = 240 minutes (4 hours) per week. 3. Private learning : 4 x 60 = 240 minutes (4 hours) per week. 	
Credit points	4 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> <p>CLO 1: Students are able to explain basic principles from the theory, especially those that are related to the real number systems.</p> <p>CLO 2: Students are able to explain basic principles related with convergence of sequences and its proving concepts.</p> <p>CLO 3: Students able to relate the concept of convergence in limit and continuity of functions.</p> <p>CLO 4: Students are able to explain basic concepts related to derivatives of functions and their properties, also its applications to some theorems.</p>	

Content	In this course students will study the Real Number System, namely a system that has complete ordered field properties, the definition of convergent sequences, monotonous and limited sequences, Cauchy sequences, limit functions, uniform continuous and continuous functions and differentiation / derivative of functions.
Study and examination requirements and forms of examination	<ul style="list-style-type: none"> ● In-class exercises ● Assignment 1, 2, 3 ● 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. Bartle R G and Sherbert D R, " Introduction to Real Analysis", 4th Edition, John Wiley & Sons, Inc. 2011 2. Sunarsini dan Sadjidon, "Modul Ajar: <i>Analisis Riil I</i>", Jurusan Matematika FMIPA-ITS, 2014. <p>Supporting :</p> <p>-</p>