



MODULE HANDBOOK

Mathematical System

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


MODULE HANDBOOK

MATHEMATICAL SYSTEM

| | | |
|---|--|--|
| Module name | Mathematical System | |
| Module level | Undergraduate | |
| Code | Bachelor | |
| Course (if applicable) | - | |
| Semester | Spring (Genap) | |
| Person responsible for the module | Prof. Dr. Basuki Widodo, M.Sc | |
| Lecturer | Dr. Didik Khusnul Arif, S.Si, M.Si | |
| Language | Bahasa Indonesia and English | |
| Relation to curriculum | Bachelor degree program, mandatory , 6 th semester. | |
| Type of teaching, contact hours | Lectures, <60 students | |
| Workload | <ol style="list-style-type: none"> 1. Lectures : 4 x 50 = 200 minutes per week. 2. Exercises and Assignments : 2 x 60 = 120 minutes (2 hours) per week. 3. Private learning : 2 x 60 = 120 minutes (2 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> <p>CLO-2 Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations</p> <p>CLO-3 Students are able to analyze simple and practical problems in at least one field of analysis, algebra, modeling, system optimizations and computing sciences</p> | |
| Content | In this course, students will be given an explanation of Riemann's integrated functions and the convergence of function sequences and function series as well as an understanding of topology in real space and continuous linear operators. | |

| | |
|---|---|
| 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 lists | <p>Main :</p> <ol style="list-style-type: none"> 1. Bartle,R,G.,Sherbert, 2010, " Introduction to Real Analysis, Fourth Edition 2. Bryan P. Rynne and Martin A Youngson, 2001, Linear Functional Analysis |

I. Rencana Pembelajaran Semester / Semester Learning Plan

|  | | INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS) FACULTY OF SCIENCE AND DATA ANALYTICS DEPARTMENT OF MATHEMATICS | | | | Kode Dokumen |
|---|--|--|--|--|--------------------------------|-------------------------------------|
| RENCANA PEMBELAJARAN SEMESTER/SEMESTER LEARNING PLAN | | | | | | |
| MATA KULIAH (MK) COURSE | KODE CODE | Rumpun MK Course Cluster | BOBOT (sks) Credits | | SEMESTER Semester | Tgl Penyusunan Complication Date |
| Mathematical System | KM184604 | Applied mathematics | 4 | | 6 | |
| OTORISASI / PENGESAHAN AUTHORIZATION/ ENDORSMENT | Dosen Pengembang RPS Developer Lecturer of Semester Learning Plan | | Koordinator RMK Course Cluster Coordination | | Ka PRODI Head of Department | |
| | | | (Jika ada) Tanda tangan | | Tanda tangan | |
| Capaian Pembelajaran | CPL-PRODI yang dibebankan pada MK ILO Program Charged to The Course | | | | | |
| Learning Outcomes | CPL-2 | [C3] Mahasiswa mampu menyelesaikan permasalahan sederhana dan praktis dengan mengaplikasikan pernyataan matematika dasar, metode dan komputasi | | | | |
| | ILO-2 | <i>[C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations</i> | | | | |
| | CPL-3 | [C4] Mahasiswa mampu menganalisis permasalahan sederhana dan praktis pada salah satu bidang analisis, aljabar, pemodelan, optimasi sistem dan ilmu komputasi | | | | |
| | ILO-3 | <i>[C4] Students are able to analyze simple and practical problems in at least one field of analysis, algebra, modeling, system optimizations and computing sciences</i> | | | | |