UNIVERSITAS NEGERI PADANG
FACULTY OF MATHEMATICS AND NATURAL SCIENCES MATHEMATICS
DEPARTMENT, MATHEMATICS STUDY PROGRAM
Main Campus Universitas Negeri Padang.
Jalan Prof. Dr. Hamka Air Tawar Padang, Sumatera Barat
Telepon: +62 751 7053902, Fax: +62 751 7055628
Email: humas@unp.ac.id

Module name:	Algorithms and Programming
Module level, if applicable:	Bachelor
Code:	MAT1. 62.4005
Subheading, if applicable:	-
Classes, if applicable:	Algorithms and Programming
Semester:	4th (fourth)
Module coordinator:	Head of Applied Mathematics Expertise Group
Lecturer(s):	Meira Parma Dewi, M.Si., Defri Ahmad, S.Pd., M.Si, and Rara Sandhy Winanda, M.Sc.
Language:	Indonesian Language and English
Classification within the curriculum:	Compulsory course in the second year (4th semester) Bachelor Degree
Teaching format / class hours per week during the semester:	a. Lectures : Problem Based Learning with methods such as expository, discussion, and practicum (1 x 50 minutes = 50 minutes). b. Structured assignment : Weekly individual written assignment. (1 x 60 minutes = 60 minutes). c. Individual study (1 x 60 minutes = 60 minutes). d. Laboratory work (2 x170 minutes = 340 minutes).
Workload:	The total workload is 136 hours per semester, which consists of 50 minutes lectures (theory) and 340 minutes laboratory work, 240 minutes structured assignment, and 240 minutes of individual study. In total, there are 16 weeks per semester, including midterm and final exams.
Credit points:	3 SKS = 4.53 ECTS
Prerequisites course(s):	Computer Application

Course outcomes:	After completing this course, students will be able to: CO1. Demonstrating logical, structured, and systematic thinking in the design of an algorithm. CO2. Create algorithms to solve real-world challenges. CO3. Translate an algorithm into language.
Content:	1. Algorithm 2. Introduction to Pascal Programming Languages 3. Program Structures 4. Types of Data and Operations 5. Branching 6. Repetition/looping 7. Array 8. Procedure 9. Functions
Study/exam achievements:	The final grade will be weighted as follows: The assessment consists of a final exam (30%), a midtest exam (20%), assignment (20 %), and practicum (30%). The final and midterm exams are divided into two sections: theory and practical test (120 minutes). Laboratory work (practicum) is intended to apply and reinforce the theories gained during the course. Each student gets a weekly assignment as an individual or group.
Forms of media:	White Board, laptop, Projector, e-learning via elearning2.unp.ac.id, and zoom meeting.
Literature:	1. Meira Parma Dewi, 2014, Algoritma dan Pemrograman, UNP 2. P. Radha Ganesan. 1997. Pascal Programming. New Age International (P) Ltd.

PLO and CO Mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1									✔	
CO2			✔							
CO3					✔					