UNIVERSITAS NEGERI PADANG
FACULTY OF MATHEMATICS AND NATURAL SCIENCES MATHEMATICS
DEPARTMENT, MATHEMATICS STUDY PROGRAM Main Campus Universitas
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Bachelor of Science in Mathematics | **MODULE HANDBOOK**

Module name:	Non-Parametric Statistics
Module level, if applicable:	Bachelor
Code:	MAT2.62.6004
Sub-heading, if applicable:	-
Classes, if applicable:	Non-Parametric Statistics
Semester:	6th (sixth)
Module coordinator:	Head Statistics Expertise Group
Lecturer(s):	Dr. Syafriandi, M.Pd., and Dra. Helma, M.Si.
Language:	Indonesian Language and English
Classification within the curriculum:	Elective course in the third year (6th semester) Bachelor Degree
Teaching format / class hours per week during the semester:	1. Lectures: Project Based Learning with methods such as expository, discussion, and presentation (3 x 50 minutes = 150 minutes). 2. Structured assignment: Project task (3 x 60 minutes = 180 minutes). 3. Individual study (3 x 60 minutes = 180 minutes).
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.
Credit points:	3 SKS/ 4,53 ECTS
Prerequisites course(s):	Elementary Statistics
Course outcomes:	After taking this course the students have ability to: CO. 1 Examine the concepts of nonparametric statistics CO. 2 Use non-parametric statistics for research data analysis CO. 3 Detect, identify and perform appropriate non-parametric statistical tests from hypothesis testing to obtain correct conclusions based on the results of the hypothesis testing.

Content:	1. Definition of nonparametric statistics
	2. Hypothesis testing, regression analysis and correlation and variance analysis.
	3. Hypothesis testing of single sample data with Wilcoxon rating
	4. Chi Square distribution, its properties and Chi Square test
	5. Goodness of fit testing with single samples and two samples Kolmogorov-Smirnov test
	6. Spearman's correlation coefficient
Study/exam achievements:	The final grade will be weighted as follows: The assessment consists of a final project (40%), a midterm exam (30%), assignment (20%) and class activities: participation, attitude, and presence (10 %). Students are separated into groups and discussed about the characteristics of data nonparametric, how to analyze, and using the appropriate models. The final project: students do study case related to the data nonparametric and find the appropriate model. A midterm test is taken to examine whether students understand the theory covered in the half-semester course.
Forms of media:	White Board, laptop, Projector, e-learning via elearning2.unp.ac.id, and zoom meeting.
Literature	1. Bower, J.A., 2013. Statistical methods for food science: introductory procedures for the food practitioner. John Wiley & Sons.
	2. Rossi, F. and Mirtchev, V., 2015. Statistics for Food Scientists: Making Sense of the Numbers. Academic Press
	3. Morgan, G.A., Leech, N.L., Gloeckner, G.W. and Barrett, K.C., 2004. SPSS for introductory statistics: Use and interpretation. Psychology Press

PLO and CO Mapping

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