



UNIVERSITAS NEGERI PADANG
 FACULTY OF MATHEMATICS AND NATURAL SCIENCES
 MATHEMATICS DEPARTMENT, MATHEMATICS EDUCATION STUDY PROGRAM
 Main Campus Universitas Negeri Padang.
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Bachelor of Mathematics Education

MODULE HANDBOOK

Module name:	Applied Regression Analysis
Module level, if applicable:	Bachelor
Code:	MAT2.61.8301
Sub-heading, if applicable:	-
Classes, if applicable:	Applied Regression Analysis
Semester:	7 th (Seventh)
Module coordinator:	Helma., M.Si.
Lecturer(s):	Helma., M.Si., and Team
Language:	Bahasa Indonesia
Classification within the curriculum:	Study Program Elective Course
Teaching format / class hours per week during the semester:	<p>Teaching format:</p> <ul style="list-style-type: none"> • Lectures (face to face activities): by Problem Based Learning with method such as Explanation, Group and Class Discussion. • Structured assignment • Independent activities • Practice <p>3 x 170 minutes = 510 minutes = 8.50 hours</p>
Workload:	<p>16 weeks per semester include Final Exam which consist of:</p> <ul style="list-style-type: none"> • 1.67 hours lectures (2 x 50 minutes) per week, • 2 hours structured assignments (2 x 60 minutes) per week, • 2 hours independent activities (2 x 60 minutes) per week • 2.83 hours practice (1 x 170) per week <p>16 x 170 x 3 = 8160 Minute =136 hours = 4.53 ECTS</p>
Credit points:	3 SKS (4.53 ECTS)
Prerequisite's course(s):	-

Course outcomes:	<p>After taking this course the students have ability to:</p> <p>CO 1 : Express the linear regression model of the given problem</p> <p>CO 2. : Adjust the linear regression model obtained with the data</p> <p>CO 3 : Change of data if a regression model is obtained that does not describe the data provided</p> <p>CO 4 : Analyze the best regression model from a given problem</p> <p>CO 5. : Show the responsibility attitude in own works</p> <p>CO6. : Maintain the responsibility attitude in team works</p>
Content:	<p>This course discusses:</p> <ol style="list-style-type: none"> 1. simple linear regression 2. multiple linear regression 3. residual analysis 4. transformation 5. diagnostics for influential data 6. polynomial regression models 7. best model selection 8. multicollinearity
Study/exam achievements:	<p>Total score= (40% x Final Exam Score) + (40% x Individual Reports) + (20% x Affective Assessment at Class Activities: Participation, Attitude, and Presence)</p> <p>The initial cut - off points for grades A, A-, B+, B, B-, C+, C, C-, and D should not be less than 85, 80, 75, 70, 65, 60, 55, 50, and 40 out of 100 respectively.</p> <p>Explanation:</p> <p>1. Final Exam</p> <ul style="list-style-type: none"> ✓ Final exam is held at the 18th meeting ✓ Final exam is a written exam and carried out in the classroom with an implementation time of 120 minutes which follows the Final exam implementation schedule of the department <p>2. Individual Report</p> <ul style="list-style-type: none"> ✓ Individual report is given as exercise before Final exam ✓ Individual report is about analyzing problem in daily life and solve it with the concept of the content in regression analysis. ✓ Assignments are given as individual task and it is submitted in limited time. <p>3. Affective Assessment</p> <ul style="list-style-type: none"> ✓ Affective assessment is held in every meeting by observing students' attitude in classroom and daily interaction at campus such as punctuality, responsibility etc. ✓ The assessment based on observation sheet and it was given score by affective rubric assessment.
Forms of media:	Board, LCD Projector, Laptop/Computer

Literature:	<ol style="list-style-type: none"> 1. Montgomery, D.C & Peck, Elizebeth A. & Vining, G.G. (2012). Introduction to Linear Regression Analysis, 5th Edition. New Jersey: John Wiley & Sons, Inc. 2. Fox, J. (2016). Applied Regression Analysis & Generalized Linear Models, Third Edition. India: Sage Publications. 3. Kleinbaum, Kupper, Nizam, and Rosenberg. (2014). Applied Regression Analysis and Other Multivariable Methods, Fifth Edition. USA: Cengaged Learning. 4. Lewis-Beck, C., & Lewis-Beck, M. (2015). Applied regression: An introduction (Vol. 22). Sage publications. 5. Chatterjee, S., & Hadi, A. S. (2013). Regression analysis by example. John Wiley & Sons.
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PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11	PLO12
CO1	✓											
CO2	✓											
CO3	✓											
CO4	✓											
CO 5										✓		
CO 6										✓		