



**Universitas Brawijaya**  
**Faculty of Mathematics and Natural Sciences**  
**Department of Statistics / Bachelor Statistics Study Programme**

**Module Handbook**

Module Name:	Econometrics (MAS61323)	
Module Level:	Bachelor	
Abbreviation, if applicable:	-	
Sub-heading, if applicable:	-	
Courses included in the module, if applicable:	-	
Semester/term:	3rd / Second Year	
Module Coordinator(s):	Rahma Fitriani, S.Si., M.Sc. Ph.D	
Lecturer(s):	Rahma Fitriani, S.Si., M.Sc. Ph.D Nurjannah, S.Si., M.Phil., Ph.D	
Language:	Indonesian	
Classification within the curriculum:	Elective Course	
Teaching format / class per week during semester:	3 × 50 minutes	
Workload:	2.5 hours lectures, 3 hours structural activities, 3 hours individual studies, 16 weeks per semester, and total 136 hours per semester 4.5 ECTS	
Credit Points:	3	
Requirements:	Introduction to Regression Analysis (MAS62122), Microeconomics (MAS62311)	
Learning goals / competencies:	<b>General Competence (Knowledge):</b>	
	ILO1	The students are able to master basic scientific concepts and statistical analysis methods applied on computing, social science, humanities, economics, industry and life science.
	ILO2	The students are able to arrange and/or choose an efficient data collection/ data generated design that applies in surveys, experiments or simulations.
	ILO3	The students are able to manage, analyze, and complete the real case using statistical method on computing, social humanities, economics, industry and life science that helped by software, then present and communicate the results.
	ILO4	The students are able to master at least two statistical softwares, including based on open source.

	ILO5	The students are able to apply logical, critical, systematic, and innovative thinking independently when applied to science and technology that contain humanities values, based on scientific principles, procedures and ethics with excellent and measurable results.
	ILO7	The students are able to improve and develop a job networks, then supervise and evaluate the team's performance they lead.
	ILO8	The students are able to apply and internalize the spirit of independence, struggle, entrepreneurship, based on values, norms, and academic ethics of Pancasila in all aspects of life.
	<b>Specific Competence:</b>	
	M1	Students are able to apply the basic concepts of econometrics. (ILO1, ILO3, ILO5)
	M2	Students are able to utilize regression analysis to form empiric model (an equation) which connects one response variable and one or some predictor variable(s) in economic field. (ILO3, ILO1, ILO4, ILO5)
	M3	Students are able to utilize regression analysis to test economic theories based on cross section data. (ILO3, ILO1, ILO4, ILO5)
	M4	Students are able to interpret the output economically. (ILO3, ILO1, ILO5)
	M5	Students are able to apply relevant techniques if faced with a mismatch of assumptions needed in regression analysis. (ILO3, ILO2, ILO4, ILO5)
	M6	Students understand advanced basics theory of economics. (ILO3, ILO1, ILO5)
	M7	Students are able to present analysis results both written and oral, in the form of both individual or group tasks. (ILO3, ILO5, ILO7, ILO8)
Contents:	1	Econometrics Definition and Regression Analysis Overview
	2	Econometrics Data Handling and Advanced Analysis in Linear Regression
	3	Multiple regression analysis and its use in econometrics
	4	Regression Model using Dummy Variables
	5	Assumptions of regression analysis, testing, violation effects, and how to solve it in the context of

		economics data.
	6	Regression Model using panel data
Soft skill attribute:	Responsible, independently, and discipline	
Study/exam achievement:	<p>Final score (NA) is calculated as follow: 10% Post Test, 10% Assignments, 20% Quizzes, 30% Midterm Exam, 30% Final Exam</p> <p>Final index is defined as follow:</p> <p>A : &gt; 80 - 100</p> <p>B+ : &gt; 75 - 80</p> <p>B : &gt; 69 - 75</p> <p>C+ : &gt; 60 - 69</p> <p>C : &gt; 55 - 60</p> <p>D+ : &gt; 50 - 55</p> <p>D : &gt; 44 - 50</p> <p>E : 0 - 44</p>	
Forms of media:	Software (Gretl and Excel), whiteboard, LCD, and Projector	
Learning methods:	Lecture and assessments	
Literature:	<b>Main:</b>	
	Gujarati, Damodar N. Basic econometrics. Tata McGraw-Hill Education, 2009.	
	<b>Support:</b>	
	Wooldridge, Jeffrey M. Introductory econometrics: A modern approach. Nelson Education, 2015.	
Notes:		