



**UNIVERSITAS GADJAH MADA**  
Faculty of Mathematics and Natural Sciences  
Department of Mathematics

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## Graduate Program in Mathematics

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## MODULE HANDBOOK

Module Name	Analisis Data Keuangan (Econometrics Analysis of Financial Data)
Module level, if applicable	Master Program
Code, if applicable	MMS-5514
Subtitle, if applicable	-
Courses, if applicable	-
Semester(s) in which the module is taught	1/first year
Person responsible for the module	Chair of Statistics Laboratory
Lecturer(s)	Prof., Dr.rer.nat., Dedi Rosadi, S.Si., M.Sc.
Language	Bahasa Indonesia
Relation to curriculum	Elective for Master Degree in Mathematics,
Teaching methods	3 hours lecture
Workload (incl. contact hours, self-study hours)	3 hours lectures, 6 hours individual study, 14 weeks per semester, and total 126 hours per semester
Credit points	3
Required and recommended prerequisites for joining the module	-

Module objectives/intended learning outcomes	<p>On successful completion of this course,</p> <ul style="list-style-type: none"> <li>• CO 1 Students should understand various econometrics model for analyzing financial data</li> <li>• CO 2 Student should be able to use R, EViews or other software to apply the econometrics model for analyzing financial data</li> <li>• CO 3 Student should be able to analyze and explains to other people about the output from statistical software</li> </ul>						
Content	Basic statistical analysis using descriptive analysis and graphics, analysis of correlation, simple regression, multiple regression, regression with dummy variable, regression with lag variable; univariate time series analysis, regression model with time series variable (case study: stationary, unit root and cointegrated), vector autoregression, volatility model (ARCH/GARCH and its extension), other advanced models						
Examination forms	Written exams and final project						
Study and examination requirements	<p>The weight of assignments will be as follows:</p> <table> <tr> <td>1. Quiz, homework, presentation</td> <td>20%</td> </tr> <tr> <td>2. Mid semester exam</td> <td>40%</td> </tr> <tr> <td>3. Final exam</td> <td>40%</td> </tr> </table>	1. Quiz, homework, presentation	20%	2. Mid semester exam	40%	3. Final exam	40%
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2. Mid semester exam	40%						
3. Final exam	40%						
Media employed	online platform, Learning management system, LCD projectors, whiteboards.						
Reading list	<p>Rosadi, D., 2011, Analisa Ekonometrika dan Runtun Waktu Terapan dengan R, Andi Ofset, Yogyakarta</p> <p>Rosadi, D., 2013, Ekonometrika dan Analisa Runtun Waktu Terapan dengan EViews, Andi Ofset, Yogyakarta</p> <p>Tsay, R.S., 2012, An Introduction to Analysis of Financial Data with R, Wiley, New York</p>						

#### CO-PLO Mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
CO 1	x						
CO 2		x	x	x	x	x	x
CO 3			x	x	x	x	x

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