

Description of Course Unit

Course unit title	Forecasting Methods
Course unit code	VS191501
Type of course unit (compulsory, optional)	Compulsory
Level of course unit (according to EQF: first cycle Bachelor, second cycle Master)	First Cycle Bachelor
Year of study when the course unit is delivered (if applicable)	
Semester/trimester when the course unit is delivered	5 th
Number of ECTS credits allocated	4.8
Name of lecturer(s)	Brodjol Sutijo
Learning outcomes of the course unit	<p>Students are able to:</p> <ul style="list-style-type: none"> - Explain the basic concepts of forecasting methods - Make forecasts with linear and non-linear trend models, moving averages, and calendar variations - Make forecast by using smoothing and decomposition methods - Explain the basic concepts of the ARIMA method and be able to identify AR and MA models - Construct ARIMA models, test the models and choose best models based on the real time series data. - Construct Seasonal ARIMA models or multiply models from real time series data - Construct Multivariate Forecasting models
Mode of delivery (face-to-face, distance learning)	Face-to-face
Prerequisites and co-requisites (if applicable)	-
Course content	<ol style="list-style-type: none"> 1. Linear and non linear trend analysis, moving average and calendar variations 2. Smoothing and decomposition models 3. Basic concept identify ARIMA Model 4. ARIMA Model (estimation and evaluation) 5. Seasonal ARIMA Model and Multiply model 6. Multivariate Forecasting Models
Recommended or required reading and other learning resources/tools	<ol style="list-style-type: none"> 1. Cryer, D.J. and Chan, K. "Time Series Analysis: with Applications in R", 2nd Edition. Springer. USA. 2005 2. Wei, W. W. S. Time Series Analysis: Univariate and Multivariate Methods, 2nd Edition. Pearson. USA.2006 3. Makridakis, S., Wheelwright, S.C., and McGee, V. E. Metode dan Aplikasi Peramalan: Jilid 1, Erlangga, Jakarta. 1988 4. Bowerman, B. L., O'Connell, R., and Koehler, A. "Forecasting, Time Series and Regression". Thomson, Brooks Cale. 2005 5. Hanke, J.E. and Wichern, D. W. Business Forecasting, 9th

	Edition, Pearson International Edition. 2008 6. Manual Minitab dan SAS Users Guide.
Planned learning activities and teaching methods	Presentation and discussion
Language of instruction	Indonesian Language and English
Assessment methods and criteria	Assignment, Quiz, Midterm Exam and Final Exam

