MODULE HANDBOOK
FORECASTING METHOD

BACHELOR DEGREE PROGRAM
DEPARTMENT OF MATHEMATICS
FACULTY OF SCIENCE AND DATA ANALYTICS

INSTITUT TEKNOLOGI SEPULUH NOPEMBER

MODULE HANDBOOK
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Module name	**Forecasting Method**	
Module level	Undergradute	
Code	KM184821	
Course (if applicable)	Forecasting Method	
Semester	Spring (Genap)	
Person responsible for the module	Endah Rokhmati MP, S.Si., M.T., Ph.D	
Lecturer	Endah Rokhmati MP, S.Si., M.T., Ph.D	
Language	Bahasa Indonesia and English	
Relation to curriculum	Undergradute degree program, **elective**, 8th semester.	
Type of teaching, contact hours	Lectures, <60 students	
Workload	1. Lectures : 2 x 50 = 100 minutes per week. 2. Exercises and Assignments : 2 x 60 = 120 minutes (2 hours) per week. 3. Private learning : 2 x 60 = 120 minutes (2 hours) per week.	
Credit points	2 credit points (sks)	
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to sit in the exams.	
Mandatory prerequisites	Probability Theory	
Learning outcomes and their corresponding PLOs	Course Learning Outcome (CLO) after completing this module, CLO 1: Students are able to explain the definition of forecasting and quantitative forecasting methods. CLO 2: Students are able to determine data patterns and trends. CLO 3: Students are able to compare several forecasting models for time series data, and determine the best suitable model.	PLO-2 PLO-3, PLO-4, PLO-5 PLO-3, PLO-4, PLO-5
Content	The discussion of forecasting method subjects includes the study of the basics of quantitative forecasting, basics of probabilistic and inferential statistics, simple moving averages for stationary patterns and linear trend	

	patterns, ACF and PACF plots, Box-Jenkins periodic series method (ARIMA model).
Study and examination requirements and forms of examination	• Assignment 1 & 2 • Mid-term examination • Final examination
Media employed	LCD, whiteboard, websites (myITS Classroom), zoom.
Reading lists	Main : 1. Andrianto US., Basith A., "Metode dan Aplikasi Peramalan, Jilid 1", Erlangga, Jakarta, 1999 2. Makridakis A. & Wheel Uright, Sc., "Forecasting Methods & Applications", John Wiley and Sons, New York, 1992 3. Wei, WWS., "Time Series Analysis : Univariate and Multivariate Methods", Addison-Wesley Publishing Company, USA, 1990 Supporting : 4. Suminto H., "Metode dan Aplikasi Peramalan, Jilid 2", Interaksara, Batam, 2000. 5. Wheelwright Sc, Mc Gee V.G., "Forecasting, 2nd ed.", John Wiley & Sons, Inc, 1983.