

<b>Course</b>	<b>Course Name</b> : <b>Forecasting Method</b>
	<b>Course Code</b> : <b>KM184821</b>
	<b>Credit</b> : <b>2</b>
	<b>Semester</b> : <b>8</b>

<b>Description of Course</b>	
This course provides forecasting methods including the basic quantitative forecasting, basic probability and statistical inference, simple moving average for stationary pattern and linear trend pattern, exponential smoothing for stationary pattern and linear trend pattern, regression method in time series analysis, ACF and PACF plot, ARIMA Box Jenkins method.	
<b>Learning Outcome</b>	
ELO 5	[C3] Able to solve problems based on theoretical concepts in at least one field of mathematics: analysis and algebra, modeling and system optimization, and computing science.
ELO 8	[C5] Able to choose decisions and alternative solutions using data and information analysis based on an attitude of leadership, creativity and have high integrity in completing work individually or in a team
<b>Course Learning Outcome</b>	
<ol style="list-style-type: none"> <li>1. Students are able to explain the definition of forecasting.</li> <li>2. Students are able to determine data patterns and trends.</li> <li>3. Students are able to determine the best forecasting model for time series data.</li> </ol>	
<b>Main Subject</b>	
The meaning and benefit of forecasting, basic of quantitative forecasting, basic probability and statistical inference, simple moving average for stationary pattern and linear trend pattern, exponential smoothing for stationary pattern and linear trend pattern, regression method in time series analysis, ACF and PACF plot, ARIMA Box Jenkins method.	

<b>Prerequisites</b>
Probability Theory
<b>Reference</b>
<ol style="list-style-type: none"><li>1. Andrianto US., Basith A., “<i>Metode dan Aplikasi Peramalan</i>, 1<sup>st</sup> Edition”, Erlangga, Jakarta, 1999</li><li>2. Makridakis A. &amp; Wheel Uright, Sc., “<i>Forecasting Methods &amp; Applications</i>”, John Wiley and Sons, New York, 1992</li><li>3. Wei, WWS., “<i>Time Series Analysis : Univariate and Multivariate Methods</i>”, Addison-Wesley Publishing Company, USA, 1990</li></ol>
<b>Supporting Reference</b>
<ol style="list-style-type: none"><li>1. Suminto H., “<i>Metode dan Aplikasi Peramalan</i>, Jilid 2”, Interaksara, Batam, 2000.</li><li>2. Wheelwright Sc, Mc Gee V.G., “<i>Forecasting</i>”, 2<sup>nd</sup> Edition., John Wiley &amp; Sons, Inc, 1983.</li></ol>