

### 1. Course Identity

<b>Course name</b>	Big Data Analysis		
<b>Faculty</b>	Business and Economics	<b>Study Program</b>	Economics
<b>Code</b>	SIE936	<b>Credit</b>	3
<b>Group</b>	Study Program	<b>Course Status</b>	Elective
<b>Semester</b>	7	<b>Availability</b>	Limited
<b>Learning Method</b>	in-class	<b>Media</b>	Blended
<b>Course Group</b>	Elective Courses	<b>Prerequisite</b>	Descriptive Statistics

### 2. Course Description

Big data analysis discusses the concepts, theories, and frameworks of data analytics activities that involve big data. This course also provides practical material in utilizing the data according to the context of the problem to be solved.

### 3. Learning Outcome

GLO Code	Formulation of Graduate Learning Outcome (GLO)	CLO Code	Formulation of Course Learning Outcome (CLO)
J	Able to apply knowledge and expertise in the field of financial economics to examine financial industry practices.	J10	Able to master the methods and tools of "Big Data" analytical procedures to understand and predict complex socio-economic phenomena.

### 4. Study Materials and Main References

<b>Study Material</b>	<ol style="list-style-type: none"> <li>1. Introduction to big data: overview, data structures, current analytical architecture, drivers of big data, and examples of big data analysis</li> <li>2. Introduction to rare event simulation and the importance of sample selection</li> <li>3. Data analytics lifecycle: discovery, data preparation, model planning, model building, communication results, operationalize.</li> <li>4. Customer selection utilizing big data analytics: introduction, methodology, experiments, and conclusion.</li> <li>5. Basic Data Analytic Methods Using R: introduction, exploratory data analysis, and statistical methods for evaluation.</li> <li>6. Advanced analytical theory and methods: clustering, association rules, regression, time series analysis, and text analysis.</li> </ol>
<b>Main Reference</b>	<ol style="list-style-type: none"> <li>1. Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data. 2015. Editor: EMC Education Services.</li> <li>2. Big Data Analytics, 1<sup>st</sup> edition. 2015. Editors: Venu Govindaraju, Vijay Raghavan, C. R. Rao. North Holland: Elsevier.</li> </ol>



Date :	Date:	Date :
Approved by the Dean	Checked by the Head of Study Program	Prepared by:
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