

Course Code	TKIT165131											
Course Name	Big Data and Analytic											
Course Instructors	Noor Akhmad Setiawan ; Silmi Fauziati											
Course Type	Elective											
Course Classification	Engineering Topics											
Credit / Contact Hour per Week	3 / 150 minutes per Week											
Course Description	This course studies about big data and analytics which cover big data infrastructure Hadoop ecosystem, MapReduce, and tools used in big data processing and also cover analytical method to find valuable knowledge of big data for decision making.											
Prerequisites Courses	-											
<b>Covered Student Outcome</b>	<b>Development of Engineering Solution (b)</b> <b>Modern Tools Utilization (e)</b> <b>Knowledge of Contemporary Issues (f)</b> <b>Engineering Awareness and Society (j)</b>											
Learning Mapping												
Code	Learning Outcome	Student Outcome										
LO1	Students are able to explain Big Data concept	Knowledge of Contemporary Issues										
LO2	Students are able to explain the ecosystem of Hadoop and MapReduce	Engineering Awareness and Society										
LO3	Students are able to explain the tools used to process big data as well as testing infrastructure and big data performance.	Modern Tools Utilization										
LO4	Students are able to explain the analytics of big data.	Development of Engineering Solution										
LO5	Students are able to perform big data processing from raw data to processed data which is ready for analytical process.	Development of Engineering Solution										
LO6	Students are able to perform the analytical process to gain knowledge or model and test the model obtained	Engineering Awareness and Society										
Topic	1. Understanding Big Data 2. Hadoop and MapReduce 3. Tools used over the Hadoop ecosystem. 4. Big Data Data Storage Testing 5. Analytic											
Direct Assesment	<table border="1"> <thead> <tr> <th>Direct Assesment Plan</th> <th>Measured Learning Outcome</th> </tr> </thead> <tbody> <tr> <td>Homework</td> <td>LO6</td> </tr> <tr> <td>Mid Exam</td> <td>LO1,LO2</td> </tr> <tr> <td>Final Exam</td> <td>LO3,LO4,LO5, LO6</td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		Direct Assesment Plan	Measured Learning Outcome	Homework	LO6	Mid Exam	LO1,LO2	Final Exam	LO3,LO4,LO5, LO6		
Direct Assesment Plan	Measured Learning Outcome											
Homework	LO6											
Mid Exam	LO1,LO2											
Final Exam	LO3,LO4,LO5, LO6											
Indirect Assesment	Questionnaire (EDOM)											
References	[1] Big Data Made Easy: A Working Guide to the Complete Hadoop Toolset Author Michael Frampton Publisher Apress, 2015											

