

Description of Course Unit

Course unit title	Exploration and Data Visualization
Course unit code	VS 191503
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
Number of ECTS credits allocated	3,2
Name of lecturer(s)	Wahyu Wibowo, Brodjol Sutijo SU, Muhammad Alifian Nuriman
Learning outcomes of the course unit	<ul style="list-style-type: none"> - Students are able to explain the concept of exploration and data visualization as well as their applications in real problems - Students are able to identify missing value, outlier, and how to solve it using SPSS and R - Students are able to determine and apply appropriate charts for different types of data - Students are able to create interactive visualizations using Google Data Studio - Students are able to create interactive visualizations using Power BI - Students are able to create interactive visualizations using Tableau - Students are able to create interactive visualizations using R Shiny
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. The concept of data exploration and data visualization 2. Detection and handling of missing value and outliers 3. Appropriate graphs/charts for infographics, video, and dashboard 4. Interactive dashboard using Google Data Studio 5. Interactive dashboard using Power BI 6. Interactive dashboard using Tableau 7. Interactive dashboard using R Shiny
Recommended or required reading and other learning resources/tools	<ol style="list-style-type: none"> 1. Kemp, Grant., White, G., 2020, Google Data Studio for Beginners, Apress 2. Milligan, JN., 2019, Learning Tableau, Packt Publishing 3. Wickham, H., Grolemund, G., 2017, R for Data Science, O'Reilly Media, Inc 4. Ferrari, A., Russo, M., 2016, Introducing Microsoft Power BI, Microsoft Press 5. Velleman, P.F., Hoaglin, D.C.,: Application, Basic, and Computing of Exploratory Data Analysis , Duxbury Press 2004

Planned learning activities and teaching methods	Problem Based Learning, Project Based Learning, Technology Based Learning
Language of instruction	Indonesian Language
Assessment methods and criteria	Assignment, Quiz, Project, Midterm Exam and Final Exam.

