Description of Course Unit

Course unit title	Statistical Computing
Course unit code	VS 191403
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	4
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	- Students are able to understand data structures and data types with Excel and R - Students are able to manage dataset and file using Excel and R - Students are able to build structural programming for statistical computational analysis - Students are able to create basic statistical functions - Students are able to perform computational process in linear algebra - Students are able to solve computational optimization problems - Students are able to generate, simulate, and compute probability of discrete and continuous events - Students are able to do hypothesis testing, correlation analysis, and simple modelling
Mode of delivery (face-to-face, distance learning)	Face to face
Prerequisites and co-requisites (if applicable)	-
Course content	1. Data Structure and Data Type 2. Data Management and File Management 3. Structural Programming 4. Simple Statistical Function 5. Computational linear algebra 6. Computational optimization problem 7. Discrete and Continuous distribution probability 8. Hypotesting testing, correlation analysis, and regression modelling
Recommended or required reading and other learning resources/tools	1. Rizzo L. Maria, 2008, Statistical Computing with R,Chapman & Hall/CRC Computer Science and Data Analysis Series, Taylor & Francis Group 2. Brett Lantz, Machine Learning with R, PACKT Publishing
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.