

### Description of Course Unit

Course unit title	Applied Probability
Course unit code	VW 191101
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	3
Number of ECTS credits allocated	6.4
Name of lecturer(s)	Sri Pingit Wulandari, Lucia Aridinanti, Mike Prastuti, Mochammad Reza Habibi, Muhammad Alifian Nuriman, Fausania Hibatullah, Mukti Ratna Dwi
Learning outcomes of the course unit	<p>Students are:</p> <ul style="list-style-type: none"> <li>- Able to explain terminology in the field of statistics</li> <li>- Able to present data and provide interpretation of information from a set of data</li> <li>- Able to calculate the probability of an event and independent, conditional, and Bayesian method</li> <li>- Able to calculate the expectation and variance of a random variable based on a discrete-continuous probability distribution function and joint probability distribution</li> <li>- Able to calculate the probability of discrete events based on Uniform, Bernoulli, Binomial, Geometric, Negative Binomial, Multinomial, Poisson, and Hypergeometric distribution models</li> <li>- Able to calculate the probability of continuous events based on Uniform, Normal, Gamma, Exponential, Chi-Square, t-Student, and F distribution models</li> </ul>
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"> <li>1. The meaning and role of statistics (definition of discrete and continuous data)</li> <li>2. Descriptive statistics (measurement scales, tables and graphs, measures of central tendency and dispersion)</li> <li>3. Probability concept</li> <li>4. Random variable</li> <li>5. Probability distribution (discrete and continue)</li> </ol>
Recommended or required reading and other learning resources/tools	<ol style="list-style-type: none"> <li>1. Walpole R E, Raymond H M, 2016, Probability and statistics for engineers and sciences</li> <li>2. Montgomery D C, Runger G C, 2014, Applied statistics and probability for engineers</li> </ol>
Planned learning activities and teaching methods	Problem-based learning and blended learning

Language of instruction	Indonesian Language
Assessment methods and criteria	Assignment, Quiz, Midterm Exam, and Final Exam

