

**MODULE HANDBOOK**

	<b>UNIVERSITAS PADJADJARAN</b> <b>FACULTY OF MATHEMATICS AND NATURAL SCIENCES</b> <b>BACHELOR OF BIOLOGY PROGRAMME</b>	<b>COURSE CODE:</b> <b>D10D-2010</b>
<b>Module designation</b>	Biostatistics	
<b>Semester in which the module is taught</b>	2	
<b>Persons responsible for the module</b>	1. Neneng Sunengsih, Dra., M.Stat. 2. Restu Arisanti, S.Si., M.Si.	
<b>Medium of instruction</b>	Indonesian	
<b>Relation to curriculum</b>	Compulsory course	
<b>Teaching methods</b>	Student-Centered Learning, Project-based Learning, Collaborative Learning	
<b>Workload</b>	Total workload : 8160 minutes = 136 hours  Lecture and discussion : 3 x 50 minutes x 16 weeks = 2400 minutes = 40 hours Exercises : 3 x 60 minutes x 16 weeks = 2880 minutes = 48 hours Self-study : 3 x 60 minutes x 16 weeks = 2880 minutes = 48 hours	
<b>Credit points</b>	3.00 (5.43 ECTS)	
<b>Required and recommended prerequisites for joining the module</b>	-	
<b>Module objectives/intended learning outcomes</b>	1. Students are able to explain and master the Basic Concepts of Statistics. 2. Students are able to calculate and interpret measures of central tendency and measures of statistical dispersion. 3. Students are able to explain the Basic Concepts of Probability and calculate and interpret expected values. 4. Students are able to explain, calculate, and analyze parameter estimation 5. Students are able to explain, calculate, and analyze hypothesis testing 6. Students are able to understand and explain the basic concepts of experimental design. Students are able to understand and explain the design and analysis of completely randomized designs 7. Students are able to calculate and analyze follow-up tests 8. Students are able to understand, explain, design, and analyze incomplete randomized block designs 9. Students are able to understand, explain, design, and analyze Latin square designs	
<b>Contents</b>	1. Basic concepts of statistics 2. Measures of central tendency and measures of statistical dispersion 3. Basic concepts of probability, calculating and interpreting expected values 4. Parameter estimation 5. Hypothesis testing 6. Basic concepts of experimental design 7. Randomized mixed designs 8. Follow-up tests 9. Randomized block designs 10. Missing data in randomized block designs 11. Incomplete randomized block designs	
<b>Examination forms</b>	Pretest, Quiz, Midterm exam, and Final exam	
<b>Study and examination requirements</b>	The minimum attendance in lectures is 80%. Final grades are evaluated based on quiz (10%), midterm exam (15%), assignment (10%), final exam (15%), project and participation (50%)	
<b>Reading lists</b>	1. Mendenhall, W., Beaver, R. J., & Beaver, B. M. (2012). Introduction to Probability and Statistics (14th ed.). Cengage Learning. Boston, MA. 2. Sudjana. (2013). Metoda Statistika. Tarsito. Bandung. 3. Walpole, R. E. (1968). Pengantar Statistika. Gramedia Pustaka Utama. Jakarta.	