



USK
UNIVERSITAS
SYIAH KUALA

FACULTY OF AGRICULTURE
DEPARTMENT OF SOIL SCIENCE

UNDERGRADUATE PROGRAM

MODULE HANDBOOK

Module designation	Statistics (SSOL1014)
Semester(s) in which the module is taught	2 nd Semester
Person responsible for the module	Dr. Ir. Muyassir, M.P.
Language	Indonesian, English
Relation to curriculum	Compulsory module for Soil Science Department
Teaching methods	Lecture, small group discussion, interactive discussion
Workload (incl. contact hours, self-study hours)	<ul style="list-style-type: none">✓ 100 minutes lecture and discussion per week✓ 120 minutes structured tasks per week✓ 120 minutes learn to be independent per week
Credit points	2 SKS = 3.2 ECTS
Required and recommended prerequisites for joining the module	SSOL1001
Module objectives/intended learning outcomes	<ul style="list-style-type: none">✓ Students can understand the concept and importance of statistics, as well as its benefits and role in the field of agriculture.✓ Students can use sampling techniques and various statistical methods to process research data and apply them in agriculture and other related fields.✓ Students can understand the concepts of random variable theory and probability, as well as their applications in sampling distributions and the introduction to sampling techniques.✓ Students understand various statistical hypothesis testing methods for drawing conclusions and writing publication articles.

Content	<p>This course is offered in odd semesters, providing an introduction to the basic concepts of statistics, including descriptive statistics, probabilistic statistics, and inferential statistics. Descriptive statistics explains the idea of data, how to present data, variables, and types of data, frequency distribution, centrality measures (means, median, mode, measured average, geometric mean), and fractile measures (quartiles, deciles, and percentiles), measures of spread and deviation (variance, standard deviation, coefficient of variation, and curve distribution (peak and skew). Probabilistic statistics discusses probability theory and its application in statistics, including various types of distributions and inference statistics, which explain how to test hypotheses statistically. These include the normal Z distribution, the t-distribution, the Chi-square distribution, the F-distribution, and various non-parametric statistics.</p>
Exams and assessment formats	<p>Paper assignment, Quiz, Midterm exam, Data Analysis Practices, Final exam.</p>
Study and examination requirements	<ul style="list-style-type: none"> ✓ Case Method: 50% ✓ Quiz: 5% ✓ Assignment: 10% ✓ Midterm exam: 15% ✓ Final exam: 20%
Reading list	<ol style="list-style-type: none"> 1. Asari, A., dkk. 2024. Pengantar Statistika. Solok: PT. Mafy Media Literasi Indonesia. 2. Susanti, E., dkk. 2021. Buku Ajar Statistika untuk Perguruan Tinggi. Indramayu: CV. Adanu Abimata. 3. Witte, R. S., & Witte, J. S. (2017). Statistics. John Wiley & Sons. 4. Kaur, P., Stoltzfus, J., & Yellapu, V. (2018). Descriptive statistics. International Journal of Academic Medicine, 4(1), 60-63. 5. Sahu, P. K. (2016). Applied statistics for agriculture, veterinary, fishery, dairy and allied fields (pp. 133-194). India: Springer. 6. Mead, R. (2017). Statistical methods in agriculture and experimental biology. Chapman and Hall/CRC.