

MODUL

ENVIRONMENTAL STATISTICS



MASTER PROGRAM OF ENVIRONMENTAL SCIENCE
SCHOOL OF POSTGRADUATE STUDIES
DIPONEGORO UNIVERSITY

A Module Descriptions :

Module design	Environmental Statistics
Module level, if applicable	
Code, if applicable	P-CIL-8-103
Subtitles, if applicable	
Courses, if applicable	
Semester(s) in which the module is taught	1 st Semester
Person responsible for the module*	Dr. Budi Warsito, S.Si, M.Si
Lecturer	1. Dr. Budi Warsito, S.Si, M.Si 2. Prof.Dr. Dra. Sunarsih, M. Si
Language	<i>Indonesian and English</i>
Relations to curriculum	
Type of teaching, contact hours	<i>Lecture: 120 minutes Q&A: 20 minutes Discussion: 20 minutes Presentation: 20 minutes Individual Assignment: 36 minutes</i>
Workload	<i>(Estimated) workload, divided into contact hours (lecture, exercise, laboratory session, etc.) and private study, including examination preparation, specified in hours,¹ and in total.</i>
Credit points	<i>2 credits / 4 ECTS</i>
Requirements according to the examination regulations	<i>Minimum attendance of lectures 75%</i>
Recommended prerequisites	<i>eg existing competences in...</i>

* Material for advance lecture perform by principal supervisor, co supervisor and student refers to research topic.

Module objectives/intended learning outcomes	Students are able to process and analyze data related to the Environmental field by applying statistical methods. Able to apply the use of statistics in the Environmental field and master the concepts needed to analyze environmental problems
Content	Environmental Statistics course discusses the meaning of statistics, descriptive statistics, basic concepts of probability, probability distribution, theoretical distribution of random variables, theoretical distribution of continuous random variables, sampling distribution, estimation, single sample hypothesis testing, multiple sample hypothesis testing, several other inferential analyzes, simple linear regression and correlation, and some non-parametric methods.
Study and examination requirements and forms of examination	• <i>Open book and close book</i> • <i>Multiple choice, case study, interview, practice</i>
Media employed	<i>Powerpoint, youtube, website</i>
Reading list	1. Darma Budi., Research Statistics Using SPSS, Guepedia Publisher, Jakarta, 2021 2. Hek Kim Tan., Introduction of Statistics, Yayasan Kita Menulis Publisher, Medan, 2021 3. Hadi, S., Statistics, Student Library, Yogyakarta, 2015. 4. Rohmad, and Supriyanto, Introduction to Statistics, Kalimedia, Yogyakarta, 2015 5. Spiegel MR, Statistics, Schaum Outline Series, McGraw-Hill, New York, 1982. 6. Supranto J., Statistical Theory and Application Volume 1, Erlangga, Jakarta, 2009. 7. Supranto J., Statistical Theory and Application Volume 2, Erlangga, Jakarta, 2009. 8. Usman, H., and Akbar, PS, Introduction to Statistics, Earth Literacy, Jakarta, 2015