

Module Description

Module title	Course Module of Educational Research Statistics
Persons responsible for each module	Dr. Firmanul Catur Wibowo, M.Pd
Teaching Methods	<p>Teaching methods used in this course are:</p> <ul style="list-style-type: none"> - Lecture (i.e., group investigation, small group discussion, case study, and video-based learning) - Structured assignments (i.e., essays and case study) <p>The class size for lecture is 20 students.</p> <p>Contact hours for lecture is 40 hours, assignments are 96 hours, and privat study is 96 hours.</p>
Credits and Workload	<p>Credit points : 7.8 ECTS</p> <p>For this course, students required to meet a minimum of 232 hours in one semester, which consist of: 40 hours for lecture, 96 hours for structured assignments, 96 hours for private study,</p>
Intended Learning Outcomes	<p>PLO 2 Master advanced knowledge of classical physics and modern physics</p> <p>PLO 7 Able to carry out scientific research in the field of physics education based on scientific methodology, logical, critical, systematic and creative thinking.</p> <p>PLO 8 Able to produce scientific articles that have novelty, and publish them in accredited national scientific journals, proceedings of international seminars, or international journals.</p>
Module Content	<p>Students will learn about:</p> <p>This course aims to discuss data analysis techniques using descriptive and inferential statistics and their interpretations. Topics covered include: basic statistical concepts, error theory, descriptive statistics, probability distribution, sampling technique, statistical hypothesis testing, normality test, homogeneity test, average similarity test, regression and correlation analysis, analysis of variance, analysis of covariance, path analysis , and a structural equation model (SEM). Students will also learn to process and analyze data using special software so that it will help them in practical research activities. Lectures will be held with a case-based learning approach. Mastery of lecture material will assist students in conducting quality research.</p>

Admission and examination requirements	Admission and examination requirements: <ul style="list-style-type: none"> - Students must attend 15 minutes before the class starts. - Students must switch off all electronic devices. - Students must inform the lecturer if they will not attend the class due to sickness, etc. - Students must submit all class assignments before the deadline. - Students must attend the exam to get final grade.
Forms of exams and details explaining how to the module mark is calculate	Form of examination: Essay Form of Assasement: Assessment of the learning process follows the following components: attendance 5%; assignments and presentations 30%; mid-test 30%, and final-test 35%.
Recommended Literature	<ol style="list-style-type: none"> 1. Neil A Weiss (2017) Introductory Statistics 10th Edition, Pearson. 2. Jimmie Leppink (2019) Statistical Methods for Experimental Research in Education and Psychology. Springer 3. Ronald E. Walpole (1997) Pengantar Statistika, Jakarta: PT Gramedia Pustaka
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