

MODUL

PHILOSOPHY OF SCIENCE AND RESEARCH METHODOLOGY



**MASTER PROGRAM OF ENVIRONMENTAL SCIENCE
SCHOOL OF POSTGRADUATE STUDIES
DIPONEGORO UNIVERSITY**

Description:

Module design	Philosophy of Science and Research Methodology
Module level, if applicable	
Code, if applicable	P-CIL-8-101
Subtitles, if applicable	
Courses, if applicable	
Semester(s) in which the module is taught	1 st Semester
Person responsible for the module	Principal Supervisor*
Lecturer	1. Principal Supervisor 2. Principal Co-Supervisor
Language	<i>Indonesian and English</i>
Relations to curriculum	Students are able to understand the position of knowledge, study of knowledge and scientific perspectives and philosophy of science through lectures and discussion activities
Type of teaching, contact hours	<i>Lecture: 180 minutes Q&A: 30 minutes Discussion: 30 minutes Presentation: 30 minutes Individual Assignment: 60 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>3 credits / 6 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	• Have the ability to explore, integrate and construct various sources of knowledge in the reality of life into the scope of science • Have the ability to select and build linkages between; the uniqueness of various local knowledge for scientific development according to the rules of science • Able to describe the relationship between knowledge, philosophy and philosophy of science from sociology, epistemology, and axiology.
Content	The Philosophy of Science course discusses; the position of knowledge, habits, beliefs of a person or group of people in science, science as a source of knowledge, scientific methods, scientific results, scientific attitudes, sources of truth and limitations of science, as well as the role of science and technology in the development of human civilization. This course trains students to think logically, critically, comprehensively, and contemplatively so that they can understand the interrelationships of various sources of knowledge in the past with the present and the future in the development of science and technology which relies on the integration of axiological anatraontology in building artifacts as scientific products.
Study and examination requirements and forms of examination	• <i>Open book and close book</i> • <i>Multiple choice, case studies, interviews</i>
Media employed	<i>Powerpoint, youtube, website</i>

Reading list	• Suharjito Didik. 2019. Introduction Research Methodology. IPB Press. Bogor • Burhanuddin Nunu. 2018. Philosophy Science. Prenadamedia Group. Jakarta • Guswandi. Methodology Research for Science and Business. 2017. Penebar Media Pustaka Publisher. Yogyakarta • Pruzan, Peter. 2016. Research Methodology The Aims, Practices and Ethics of Science. Switzerland: Springer Cham. • Novikov, A.M., & Novikov, D.A. 2013. Research Methodology: From Philosophy of Science to Research Design (1st ed.). CRC Press. • Noeng Muhajir. 2011. Philosophy of Science: ontology, epistemology, axiology. Yogyakarta: Rake Sarasin
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