MODUL
PHILOSOPHY OF SCIENCE AND RESEARCH METHODOLOGY

MASTER PROGRAM OF ENVIRONMENTAL SCIENCE
SCHOOL OF POSTGRADUATED STUDIES
DIPONEGORO UNIVERSITY

Module Description:

Module Name	Philosophy of Science and Research Methodology
Module level, if applicable	
Code, if applicable	P-CIL-8-101
Subtitles, if any	
Course, if applicable	
Semester(s) in which the module is taught	Semester 1
Module Responsible	Prof Drs. Sudharto Prawata Hadi, MES, Ph.D.
Teaching Lecturer	1. Prof Drs. Sudharto Prawata Hadi, MES, Ph.D. 2. Prof. Dr. Ir. Purwanto, DEA
Language	*Indonesian and English*
Relationship with curriculum	Students are able to understand the position of science, scientific studies and scientific perspectives and philosophy of science through lectures and discussions
Type of teaching, hours of contact	*Lectures: 1 x 180 minutes x 16 meetings = 48 hours/week* *Q&A: 1 x 30 minutes x 16 meetings = 8 hours/week* *Discussion: 1 x 30 minutes x 16 meetings = 8 hours/week* *Presentation: 1 x 30 minutes x 16 meetings = 8 hours/week* *Individual assignment: 60 minutes/day = 5 hours/week Total work for 1 semester = 150 hours = 6 ECTS*
Workload	*(Estimated) workload, divided into contact hours (lectures, exercises, laboratory sessions, etc.) and personal study, including test preparation, specified in hours,*[1]*and overall.*
credit points	*3 Credits / 6 ECTS*
Requirements according to the exam regulations	*Lecture attendance of at least 75%*
Recommended prerequisites	*For example, competence in...*

Modul the desired learning objectives/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 choose and build linkages between; the uniqueness of various local wisdoms for scientific development according to scientific principles • Be able to describe the relationship between science, philosophy and philosophy of science of sociology, epistemology, and axiology.
Fill	The Philosophy of Science course discusses; position of knowledge, habits, beliefs of a person or group of people in science, science as a source of knowledge, scientific method, scientific results, scientific attitudes, sources of truth and limitations of knowledge, 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 is based on the integration of axiological anatraontology. in constructing artifacts as scientific products.
Study and examexam requirements and forms	• *Open the book and close the book* • *Multiple choice, case studies, interviews*
Media used	*Powerpoint, youtube, website*
Read reference	• Kant, Immanuel. 2004. Criticism of Practical Reasons. Mineola, NY.: Dover Publications, Inc. • Noeng Muhajir. 2011. Philosophy of Science: ontology, epistemology, axiology. Yogyakarta: Rake Sarasin. • Novikov, AM, & Novikov, DA 2013. Research Methodology: From Philosophy of Science to Research Design (1st ed.). CRC Press. • Pruzan, Peter. 2016. Research Methodology Objectives, Practice and Ethics of Science. Switzerland: Springer Cham.

	• Whitehead, N. Alfred. 2001. The Ratio Function. Translate. Yogyakarta: Kanisius Publisher. • Zainal Abidin. 2003. Human Philosophy: understanding humans through philosophy. Bandung: PT. Rosdakarya youth.