Course Module

Philosophy of Science

Faculty of Forestry

Mulawarman University

Module name	Philosophy of Science
Modul level, if applicable	Doctoral
Code, if applicable	190401902W001
Subtitle, if applicable	
Courses, if applicable	Regular
Semester(s) in which the module is taught	I (one)
Person resposible for the module	Prof. Dr. H. Harihanto, M.S.
Lecturer	Prof. Dr. H. Harihanto, M.S. Dr. Muhammad Arifin, M.Hum.
Language	Indonesia, English
Relation to curriculum	Compulsory
Type of teaching, contact hours	Direct instruction, discussion, and assignment
Workload	Number of meetings per semester 16 meetings (14 meetings for learning activity, 1 meeting for mid-semester, 1 meeting for final examination) For this course, students are required to meet a minimum of 79.3 hours per semester, which consist of : - 23.33 hours for lecture - 28 hours for structured assignments - 28 hours for individual study
Credit points	2 SKS / 3.2 ECTS Details: 1 Credit = 170 min / week 1 Credit = 170 min x 14 week = 2380 min / semester 1 Credit = 39.7 h / semester 1 ECTS = 25 h/ Semester 1 Credit = 1.59 » 1.6

	2 Credit = 1.6 x 2 = 3.2 ECTS
Requirements according to the examination regulations	
Recommended prerequisites	
Module objectives/intended learning outcomes	**Intended Learning Outcome (ILO)** **Attitude** 1. **CPL1/ILO1 (S1)** - Internalize values, norms, and ethics **Knowledge** 2. **CPL2/ILO2 (P1)** - Synthesize knowledge acquired from research findings with novelty and its implementation 3. **CPL3/ILO3 (P2)** - Discover and develop scientific conceptions with novelty value, and develop scientific arguments as scientific solutions **General Skills** 4. **CPL4/ILO4 (KU1)** - Critically analyze the philosophy, theory, and research methodology in forestry and the moist tropical environment sciences through interdisciplinary, multidisciplinary, and transdisciplinary approaches 5. **CPL5/ILO5 (KU2)** - Demonstrate academic leadership in resource management to independently formulate research plans and possess scientific ethics **Specialized Skills** 6. **CPL6/ILO6 (GS3)** - Manage data and information to support decision-making processes 7. **CPL7/ILO7 (GS4)** - Work and communicate in an international context **Cource Learning Outcome (CLO)** 1. **CLO 1:** Students are able to explain the basic concepts and approaches to scientific research, including the types of research and their objectives. 2. **CLO 2:** Students are able to conduct advanced literature searches and apply techniques to determine the relevance and currency of research themes. 3. **CLO 3:** Students are able to apply selected research methodologies to produce valid data and systematically and scientifically write the research findings.
Content	This course offers a comprehensive introduction to the fundamentals of philosophy and scientific inquiry. It begins by defining philosophy and its systematic framework, before exploring the nature of scientific knowledge, including its aspects and elements. The curriculum guides students in developing independent assignments that are directly related to their dissertation research plans, ensuring practical application of theoretical concepts. A significant portion of the course is dedicated to teaching scientific thinking, the research process, and

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<tr><td></td><td>the intricacies of research report writing. Additionally, the course covers the sources of knowledge, and compares the philosophical underpinnings with scientific approaches. The complete topic of each meeting is mentioned below:

1. Explaining the meaning and systematic framework of philosophy (1st–2nd sessions) → CLO1
2. Explaining scientific knowledge, its aspects, and its elements (3rd–5th sessions) → CLO1
3. Developing independent assignments related to dissertation research plans (6th–7th sessions) → CLO2
4. Midterm Exam (8th session) → Assessment
5. Explaining and formulating steps for scientific thinking, research processes, and research report writing (9th–11th sessions) → CLO3
6. Explaining the sources of knowledge and the comparison between philosophy and science (12th–13th sessions) → CLO1.
7. Explaining theories of truth, scientific methods, and scientific resources (14th–15th sessions) → CLO3.
8. Final Exam (16th session) → Assessment</td></tr>
<tr><td>Study and examination requirements and forms of

examination</td><td>Evaluation and assessment of learning achievement based on:
<table>
<tr><th>No.</th><th>Objects of Assessment</th><th>Forms of Assessment</th><th>Quantity (%)</th></tr>
<tr><td>1</td><td>Affective</td><td>Participation</td><td>10</td></tr>
<tr><td>2</td><td>Assignment/Case Study</td><td>Group Presentation</td><td>25</td></tr>
<tr><td>3</td><td>Project</td><td>Report</td><td>25</td></tr>
<tr><td>4</td><td>Mid-semester test</td><td>Written test</td><td>15</td></tr>
<tr><td>5</td><td>Final semester test</td><td>Written test</td><td>25</td></tr>
<tr><td colspan="3">TOTAL</td><td>100</td></tr>
</table></td></tr>
<tr><td>Media employed</td><td>Class, Ms. Powerpoint, Ms. Word, Computer, LCD, STAR</td></tr>
<tr><td>Reading list</td><td>1. Lahjie AM. 2019. Materi Kuliah Metode Ilmiah. Fakultas Kehutanan Universitas Mulawarman
2. Nazir. 2003. Metode Penelitian. Ghalia Indonesia, Jakarta.
3. Bakhtiar A. 2013. Filsafat Ilmu. Rajawali, Jakarta
4. Banasuru A, 2012. Filsafat dan Filsafat Ilmu. Alfabeta, Bandung.
5. Sumantri JS, 2000. Filsafat Ilmu, sebuah pengantar popular. Pustaka Sinar Harapan, Jakarta
6. Sumantri JS, 1978. Ilmu dalam perspektif. Gramadia, Jakarta
7. Louis OK, 1953.Elements of Philosophy. The Ronald Press Company, New York.
8. Poedjawiatna, 1991. Tahu dan Pengetahuan. Rineka Cipta, Jakarta.
9. Surajiyo, 2005. Ilmu Filsafat Bumi. Aksara, Jakarta</td></tr>
</table>

	10. Supomo K, 2006. Mengembangkan Logika. Penerbit PT Grahanusa Mediatama Raya, Jakarta. 11. Various other related scientific articles on the Philosophy of Science