

1. Philosophy of Science and Research Methodology

Module designation	Philosophy of Science and Research Methodology
Module level, if applicable	-
Code, if applicable	C IL 2 3 811
Subtitle, if applicable	-
Courses, if applicable	-
Semester(s) in which the module is taught	1 st Semester
Person responsible for the module	Prof. Sudharto Prawata Hadi, MES, Ph.D.
Lecturer	<ol style="list-style-type: none"> 1. Prof. Sudharto Prawata Hadi, MES, Ph.D. 2. Prof. Dr. Ir. Purwanto, DEA 3. Dr. Dra. Henna Rya Abdurachim, Apt., MES
Language	<i>Indonesian and English</i>
Relation 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	<ul style="list-style-type: none"> • Regular meeting with Lecturer 16 times (40 hours with total contact hour per teaching is 2.5 hours weekly for 16 weeks). This activity consists of Lecture: 80 minutes; Q&A: 20 minutes; Discussion: 30 minutes; Presentation: 20 minutes). • Independent work on reading materials and literature review (48 hours, 3 hours weekly for 16 weeks). • Preparing paper and final personal assignment (96 hours, 6 hours weekly for 16 weeks). • Peer group discussion (24 hours, 1.5 hour weekly for 16 weeks). • Personal work on reflecting the course's gained knowledge to the student's research topic (17.6 hours, 1.1 hours weekly for 16 weeks). <p>Total contact hours in 1 semester = 225 hours</p>
Student Workload for One ECTS	<ul style="list-style-type: none"> • Face-to-face Lecturers in class (4.44 hours) • Independent work (reading books, materials, papers, literature review, etc. : 5.33 hours) • Preparing paper and structured assignments (doing homework or assignments given by lecturers : 10.67 hours)

	<ul style="list-style-type: none"> • Peer group discussion (2.67 hours) • Personal work on reflecting the course's gained knowledge to the student's research topic (1.89 hours) <p>Total workload for one ECTS = 25 hours</p>
Laboratory work	This course requires no laboratory work
Credit points	3 SKS which equivalent to 9 ECTS
Requirements according to the examination regulations	Minimum attendance of lectures 75%
Recommended prerequisites	-
Module objectives/ intended learning outcomes	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • The Philosophy of Science course discusses • The position of knowledge, habits, beliefs of a person or group of people in science, knowledge of sources of knowledge, scientific methods, scientific results, scientific attitudes, sources of truth and limitations of science • The role of science and technology in the development of human civilization • This course trains students to think logically, critically, comprehensively, and contemplatively • Understand the interrelationship between various sources of knowledge in the past with the present and the future in the development of science and technology • The integration of axiological anthropology in building artifacts as scientific products.
Reading Materials	<p>Amaratunga, D., Baldry, D., Sarshar, M., & Newton, R. (2002). Quantitative and Qualitative Research in the Built Environment: Application of "Mixed" Research Approach. Work Study.</p> <p>Howell, K. E. (2012). An Introduction to the Philosophy of Methodology. Sage.</p> <p>Kothari, C. R. (2004). Research Methodology: Methods and Techniques. New Age International.</p>

	Snyder, H. (2019). Literature Review as a Research Methodology: An Overview and Guidelines. <i>Journal of Business Research</i> , 104, 333-339.
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