

**DOCTORAL SCHOOL OF WROCLAW UNIVERSITY OF SCIENCE AND  
TECHNOLOGY**

**SUPERVISOR DECLARING/CONDUCTING COURSE:** Mateusz Kotowski, Ph.D.  
**DEPARTMENT:** Faculty of Humanities and Social Sciences  
**SCIENTIFIC DISCIPLINE:** Philosophy

**COURSE CARD**

**Course name in Polish:** Wybrane zagadnienia filozofii nauki  
**Course name in English:** Selected topics in philosophy of science  
**Course language:** English  
**University-wide general course type\*:**  
**The course is intended for all PhD students:** YES / NO

- 1) BASIC COURSE
- 2) SPECIALIST COURSE
- 3) SEMINAR
- 4) HUMANISTIC COURSE
- 5) LANGUAGE

**Subject code:** DHQ100286W

\* delete as applicable

	Lecture	Foreign language course	Seminar	Mixed forms
Number of hours of organized classes in university (ZZU)	15			
Grading	Exam	Exam	Oral presentation	Exam, inspection, evaluation classes

**PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**

Basic knowledge in humanities and social sciences.

**COURSE OBJECTIVES**

- C1 Introduce students to basic concepts and issues of philosophy and methodology of empirical sciences
- C2 Introduce students to selected results of contemporary metascientific studies
- C3 Make students aware of the social role of scientists and their responsibilities
- C4 Introduce students to contemporary approaches in science management and to make them aware of the related meta-scientific and social problems

**PROGRAM CONTENTS**

Form of classes	Number of hours

**DOCTORAL SCHOOL OF WROCLAW UNIVERSITY OF SCIENCE AND  
TECHNOLOGY**

L1	Conventional image of science and its inadequacy	1
L2	Basic assumptions of confirmationist methodologies	2
L3	Criticism of falsificationism	2
L4	Epistemological lessons from the historical studies of science	2
L5	The problem of pseudoscience	2
L6	Between science and pseudoscience	2
L7	The problem with models of scientific evaluation	2
L8	The question of the epistemic status of scientific theories	2
	Total hours	15

<b>TEACHING TOOLS USED</b>
N1. Informative lecture N2. Interactive lecture N3. Multimedia presentation N4. Discussion

<b>ACHIEVED SUBJECT LEARNING OUTCOMES</b>		
Type of learning outcome	Code of learning outcome	Assessment of learning outcome
Knowledge	P8S_WK	Oral exam
Social competences	P8S_KO	Discussion

<b>PRIMARY AND SECONDARY LITERATURE</b>
<p><b><u>PRIMARY LITERATURE:</u></b></p> <p>[1] Lipton P., <i>Inference to the Best Explanation</i>, Routledge (1991)            [2] Morawski R.Z., <i>Technoscientific Research. Methodological and Ethical Aspects</i>, de Gruyter (2019)            [3] Papineau D. (ed.), <i>The Philosophy of Science</i>, Oxford University Press (1996)            [4] Pigliucci M., Boudry M. (eds.), <i>Philosophy of Pseudoscience: Reconsidering the Demarcation Problem</i>, The University of Chicago Press (2013)            [5] Psillos S., <i>Philosophy of Science A–Z</i>, Edinburgh University Press (2007)            [6] Stanford Encyclopedia of Philosophy, <a href="https://plato.stanford.edu/">https://plato.stanford.edu/</a></p> <p><b><u>SECONDARY LITERATURE:</u></b></p> <p>[1] Carnap R., <i>Philosophy and Logical Syntax</i>, Ams Pr Inc (1979)            [2] Cartwright N., <i>How the Laws of Physics Lie</i>, Oxford University Press (1983)            [3] Duhem P., <i>The Aim and Structure of Physical Theory</i>, P.P. Wiener (trans), Princeton University Press (1954)            [4] Feyerabend P.K., <i>Against Method</i>, Verso Books (1975)            [5] Hossenfelder S., <i>Lost in Math: How Beauty Leads Physics Astray</i>, Hachette (2018)            [6] Kragh H., <i>Higher Speculations: Grand Theories and Failed Revolutions in Physics and Cosmology</i>, Oxford University Press (2015);</p>

**DOCTORAL SCHOOL OF WROCLAW UNIVERSITY OF SCIENCE AND  
TECHNOLOGY**

- |      |   |
|------|---|
| [7]  | Krimsky S., <i>Science in the Private Interest: Has the Lure of Profits Corrupted Biomedical Research?</i> , Rowman & Littlefield Publishers (2003) |
| [8]  | Kuhn T.S., <i>The Structure of Scientific Revolutions</i> , University of Chicago Press (1962)  |
| [9]  | Lakatos I., <i>The Methodology of Scientific Research Programmes</i> , Cambridge University Press (1978)  |
| [10] | Park R., <i>Superstition: Belief in the Age of Science</i> , Princeton University Press (2008)  |
| [11] | Park R., <i>Voodoo Science: The Road from Foolishness to Fraud</i> , Oxford University Press (2000)   |
| [12] | Pigliucci M., <i>Nonsense on Stilts: How to Tell Science from Bunk</i> , The University of Chicago Press (2010)                                     |
| [13] | Poincaré H., <i>The Value of Science: Essential Writings of Henri Poincaré</i> , Modern Library (2001)  |
| [14] | Popper K.R., <i>Conjectures and Refutations</i> , Routledge (1963)  |
| [15] | Popper K.R., <i>The Logic of Scientific Discovery</i> , Routledge (2002)  |

<b>SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)</b>
--

<b>Mateusz Kotowski</b> <b>mateusz.kotowski@pwr.edu.pl</b>
---