

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

SUPERVISOR/TEAM/ DECLARING/CONDUCTING COURSE: prof. dr hab. Andrzej Kisielewicz

DEPARTMENT: Faculty of Mathematics

SCIENTIFIC DISCIPLINE: Mathematics

COURSE CARD

Course name in Polish: Logika praktyczna i argumentacja

Course name in English: Practical logic and argumentation

Course language Polish

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: MAQ100071W

	Lecture	Foreign language course	Seminar	Mixed forms
Number of hours of organized classes in university (ZZU)	30			
Grading	exam			

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

general higher education

COURSE OBJECTIVES

The aim of the course is to acquire knowledge and increase practical skills in the field of:

- 1) rules of correct reasoning and drawing accurate conclusions
- 2) distinguishing between truth and falsehood
- 3) ways of clear and exact formulation of thoughts
- 4) principles of effective argumentation and justification of claims
- 5) principles of rational discussion and critical thinking

Form of classes – lectures (L)		Number of hours
L1	The concept of argumentation, logical argumentation, deductive and inductive inference, argumentation diagrams, making diagrams and arguments assessment, principle of clarity.	8
L2	Practical logic mechanisms, analysis of possibilities, concept of	6

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	reasonable possibility, methods of reaching logical conclusions, logic and action, scientific method, cognitive dialogue.	
L3	Natural language and meaning, defining and definitions, ambiguity and vagueness, explanation of meanings, role of context.	4
L4	Methods for clarifying and explaining meanings, ambiguity of sentences, classification of sentences.	4
L5	Logic and rhetoric, line of division, errors of reasoning errors and eristic tricks, use of formal logic, clarifying meaning by synthesizing sentences and context, quantifier phrases, hierarchies of values.	6
L6	A method of logical analysis of reasoning in natural language	2
	Total hours	30

TEACHING TOOLS USED

N1. Lecture
N2. Presentation
N3. Discussion
N4. Self-work

ACHIEVED SUBJECT LEARNING OUTCOMES

Type of learning outcome	Code of learning outcome	Assessment of learning outcome
Knowledge	P8S_WG	Knows fundamentals of logic and rhetoric as well as <u>basic principles of critical thinking</u>
Knowledge	P8S_WK	Knows and understands mechanisms of practical logic
Skills	P8U_UU	Performs logical analysis of texts in natural language
Skills	P8S_UW	Is able to assess a presented argument
Skills	P8S_UO	Is able to start a discussion, presenting and <u>assessing different opinions and positions</u>
Social competences	P8S_KK	Is ready to essential discussion, in particular actively presents critical attitude to statements unsupported by logical justification

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PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

- [1] L.A. Groarke, C.W. Tindale, Good Reasoning Matters! (A Constructive Approach to Critical Thinking), wyd. 4, Oxford University Press, Oxford 2008
- [2] A. Kisielewicz, Logika i argumentacja, PWN, Warszawa 2017

SECONDARY LITERATURE:

- [3] R. Descartes, Discours de la méthode, 1637 (wyd. polskie: Rozprawa o metodzie, PWN, Warszawa 1981)
- [4] A. Kisielewicz, Sztuczna inteligencja i logika, WNT, Warszawa 2011
- [5] B. Pascal, The Art of Persuasion, w: Thoughts, Letters and Minor Works (Harvard Classics, Part 48), New York, P.F. Collier and Son, 1908
- [6] T. Pszczołowski, Umiejętność przekonywania i dyskusji, Wiedza Powszechna, Warszawa 1963
- [7] A. Schopenhauer, Erystyka czyli sztuka prowadzenia sporów, Wydawnictwo Literackie, Kraków 1976

SUBJECT SUPERVISOR (NAME AND SURNAME, E-MAIL ADDRESS)

prof. dr hab. Andrzej Kisielewicz (andrzej.kisielewicz@pwr.edu.pl)