Warsaw University
of Technology

COURSE OFFERED IN THE DOCTORAL SCHOOL

Code of the course	4606-EW-0000000-0322	Name of the course	Polish	**Myślenie Krytyczne**	
			English	**Critical Thinking**	
Type of the course	Researcher's workshop (*warsztat badacza*)				
Course coordinator	dr hab Antonio Vassallo		Course teacher	dr hab Antonio Vassallo	
Implementing unit	WAiNS	Scientific discipline / disciplines*			
Level of education	Doctoral studies	Semester	Winter		
Language of the course	English				
Type of assessment	Grading	Number of hours in a semester	30	ECTS credits	2
Minimum number of participants	12	Maximum number of participants	40	Available for students (BSc, MSc)	Yes

Type of classes		Lecture	Auditory classes	Project classes	Laboratory	Seminar
Number of hours	in a week	2				
	in a semester	30				

* does not apply to the Researcher's Workshop

1. Prerequisites

No prerequisites.

2. Course objectives

The course presents an extensive introduction to the foundations of critical thinking, with an emphasis on how it impacts both scientific research and everyday life. The course will provide the students with the analytical tools needed to develop arguments and evaluate their strength. In the end, the students will be able to assess the fairness of any debate and elaborate the appropriate arguments to win it.

3. Course content (separate for each type of classes)

Lecture

During each class, the students will learn different techniques for the elaboration of rational arguments, especially in response to a dialectical challenge. The students will also be asked to solve a number of exercises that will train their critical thinking skills. A written wrap-up test will be given to the students at the end of the course to assess their overall progress.

The course topics are:

- Propositions.
- Argument Analysis.
- Fallacies.
- Categorical Propositions.
- Categorical Syllogisms.
- Reasoning with Syllogisms.
- Inductive Generalizations.
- Argument by Analogy.

4. Learning outcomes

Type of learning outcomes	Learning outcomes description	Reference to the learning outcomes of the WUT DS	Learning outcomes verification methods*

Knowledge			
K01	The students will know and understand the theoretical foundations of rational thinking, including the research methodologies involved in argumentative analysis.	SD_W3	Active participation during classes and written test.
K02	The students will know and understand the basic argumentative structure of discussions taking place within the framework of professional and everyday activities, including their ethical implications.	SD_W4	Active participation during classes and written test.
K03	The students will know and understand the impact of critical thinking in any type of knowledge transfer process, especially in scientific and social contexts.	SD_W5	Active participation during classes and written test.
Skills			
S02	The students will be able to apply critical thinking to the analysis of complex conceptual problems and argue convincingly for the most rational solution.	SD_U2	Active participation during classes and written test.
S01	The students will be able to initiate and participate in scientific and public debates by providing substantial argumentative contributions to the discussion.	SD_U5	Active participation during classes and written test.
Social competences			
SC01	The students will be ready to critically assess the strength of any argument in light of the evidence available at the moment and to update their judgment in case of a change in said evidence.	SD_K1	Active participation during classes and written test.

*Allowed learning outcomes verification methods: exam; oral exam; written test; oral test; project evaluation; report evaluation; presentation evaluation; active participation during classes; homework; tests

5. Assessment criteria
40% Active participation during classes. 60% Written test.

6. Literature
Primary reference: [1] D. Kelley – "The Art of Reasoning." Norton & Company Inc., 2014 Secondary references: [1] A. Thomson – "Critical Reasoning." Routledge, 2009. [2] W. Sinnott-Armstrong, R.J. Fogelin – "Understanding Arguments." Wadsworth, Cengage Learning, 2010.

7. PhD student's workload necessary to achieve the learning outcomes**		
No.	Description	Number of hours
1	Hours of scheduled instruction given by the academic teacher in the classroom	30
2	Hours of consultations with the academic teacher, exams, tests, etc.	5
3	Amount of time devoted to the preparation for classes, preparation of presentations, reports, projects, homework	10
4	Amount of time devoted to the preparation for exams, test, assessments	15
	Total number of hours	**60**
	ECTS credits	**2**

** 1 ECTS = 25-30 hours of the PhD students work (2 ECTS = 60 hours; 4 ECTS = 110 hours, etc.)

8. Additional information	
Number of ECTS credits for classes requiring direct participation of academic teachers	1
Number of ECTS credits earned by a student in a practical course	1