



Subject card

Subject name and code	Elements of logic and epistemology, PG_00045329						
Field of study	Data Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2020/2021		
Education level	first-cycle studies	Subject group			Obligatory subject group in the field of study Humanistic-social subject group		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			English		
Semester of study	1	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Social Sciences and Philosophy -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Mateusz Bonecki				
	Teachers		dr Mateusz Bonecki				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	30.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
Adresy na platformie eNauczanie: Elements of Logic and Epistemology - Moodle ID: 10725 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=10725							
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		2.0		18.0	50
Subject objectives	The classes are to introduce students to epistemology and classical logic (propositional calculus, predicate calculus, relations).						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_W13] Knows legal norms as well as ethical and cognitive rules that determine the functioning of social structures		Knows basic epistemological problems and conceptions, uses properly relevant terminology.		[SW1] Assessment of factual knowledge		
	[K6_K02] is aware of the role of a technical university graduate in the society; reflects on ethical, scientific and social aspects of the performed work; understands the necessity of participation in social projects and complies with copyright law, taking into account economic, legal and technical aspects.		Knows basic theoretical controversies related to the concept of consciousness, knows phenomenology and its conceptual apparatus.		[SK5] Assessment of ability to solve problems that arise in practice		
	[K6_U14] can apply knowledge from the field of humanities or social sciences to solve problems.		Realizes to which extent so called "natural attitude" is based on mostly unconscious fundamental epistemologic prejudices.		[SU2] Assessment of ability to analyse information		
[K6_U10] correctly uses legal norms as well as ethical and cognitive rules in solving specific socio-economic problems.		Analyzes, recognizes and applies in practise basic logical operations such as: classification, definition, inference etc.		[SU4] Assessment of ability to use methods and tools			

Subject contents	<ol style="list-style-type: none"> 1. Introduction to logic. Logic and Language, Functions of Language Logic and Meaning. Name and Concept. Definitions and Division. Deductive, Reductive and Inductive Reasoning. 2. Propositions and Judgments and their Forms. Propositional Calculus. Rules of propositional Calculus. Predicate Calculus. 3. Basic Notions of Set Theory. Logical relations. 4. Logic and rhetoric. Non-classical logic and modal logic - an overview. Logic, methodology of sciences and epistemology. 5. Epistemology and philosophy of science: general characteristic. Scepticism. Internalism-externalism controversy. 6. Sources of our beliefs: perception, memory, relation of others. Realism and antirealism. Primary/secondary quality distinction. 7. Natural sciences research and investigation, empiricism, rationalism and problem of induction. 8. Probabilism, abductionism, falsificationism. Problem of demarcation, critique of neopositivism. Transcendentalism as a stance in philosophy. Kant's Critical Philosophy as a Model of Knowledge. 9. Models of explanation. Ceteris paribus clause. Nomological-deductive model of Hempel-Oppenheim. Functional-genetic explanation, teleological explanation. Theory-laden observation: Duhem-Quine thesis. 10. Consciousness, self-consciousness, unconsciousness, subconsciousness. Introspection and subjective experience. 11. Consciousness, qualia and the problem of perception. Consciousness and the problem of supervenience. Body-mind problem. 12. Phenomenological conceptions of consciousness: Husserl and Brentano. Intentional objects. Semantic intent and intensionality. 13. Intentionality and mental representation. Language of thought. Wide and narrow mental content. 14. Intentionality, consciousness and emotions. Emotions, computational intelligence and AI. 15. Epistemology, philosophy of language and philosophy of culture. Wittgenstein's Philosophical Investigations. Epistemology and Hermeneutics. 			
Prerequisites and co-requisites	No recommendations			
Assessment methods and criteria	Subject passing criteria		Passing threshold	Percentage of the final grade
	Final test		50.0%	50.0%
	Midterm tests		50.0%	50.0%
Recommended reading	Basic literature		<ol style="list-style-type: none"> 1. Wolenski, J. (2000), Epistemologia, 3 tomy, Kraków: Wydawnictwo Aureus. 2. R. Piłat, Umysł jako model świata, Warszawa 1999. 3. J.R.Searle, Umysł, mózg i nauka, Warszawa 1995. 4. L. Borkowski, Elementy logiki formalnej. PWN, Warszawa, 1974. 5. B. Stanosz, Wprowadzenie do logiki formalnej. PWN, Warszawa, 1985. 	
	Supplementary literature		<ol style="list-style-type: none"> 1. Morton, A. (2002), Przewodnik po teorii poznania, Warszawa: Wydawnictwo Spacja. 2. Mała encyklopedia logiki, Wrocław. Warszawa, Kraków, Ossolineum, 1970. 	
	eResources addresses		Elements of Logic and Epistemology - Moodle ID: 10725 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=10725	
Example issues/ example questions/ tasks being completed	<ol style="list-style-type: none"> 1. What is apriorism. 2. Find out if given formula is a tautology of a Propositional Calculus. 3. Examine given sentences and find out if conclusion follows from the premises. 4. Describe the internalism-externalism controversy. 5. What is phenomenology. 			
Work placement	Not applicable			