



Subject card

Subject name and code	Elements of logic and epistemology, PG_00045329						
Field of study	Data Engineering						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2023/2024		
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 Philosophy And Science Methodology -> Faculty Of Management And Economics -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Jakub Gużyński				
	Teachers		dr Jakub Gużyński				
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						
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	This course serves as an introduction to the problems of epistemology and logic.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[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		
	[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_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_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		

Subject contents	<p>1. Introduction to the course. Requirements and class etiquette. What is philosophy, what is logic, what is epistemology?</p> <p>2. Introduction to logic. Basic concepts of logic.</p> <p>3. Propositional calculus. Basic logic functions. Tautologies. Proof by contradiction. Exercises.</p> <p>4. Logical rules of inference. Paradoxes of material implication. Introduction to the predicate calculus.</p> <p>5. Exercises in predicate calculus. Logical relations. Common logical mistakes.</p> <p>6. Unearthing the old epistemological dispute on the source of knowledge. Platos rationalism and Aristotles empiricism.</p> <p>7. Modern turn to epistemology. Rationalism of Descartes and Leibnitz. British empiricism of Bacon and Locke. Birth of modern science.</p> <p>8. Idealism vs realism. <i>A priori vs a posteriori</i> in cognition and knowledge. Kants answer to David Humes scepticism. Kants critical (transcendental) idealism and novelty of his approach.</p> <p>9. Correspondence theory of truth. Scepticism and sceptic arguments in epistemology. Problem of perception, argument from illusion. Do we reflect external world directly in our consciousness/mental representations? Semantic, pragmatic and coherent theories of truth.</p> <p>10. Contemporary epistemology. Knowledge as justified belief. Sources of knowledge: perception, memory, introspection, testimony. Gettiers challenge. Structures of justification (foundational, coherent, infinitism). Externalism vs internalism.</p> <p>11. Introduction to the philosophy of the mind: major controversies. Body-mind problem. Consciousness, <i>qualia</i>, supervenience. Conceptions of naturalized mind and the influence of evolutionary psychology. Turing on machines and Searles Chinese room argument. Hilary Putnam and brains in vat.</p> <p>12. Linguistic turn. Ludwig Wittgenstein: from examining the consciousness to the philosophy of language. Austin: we do things with words! The essence of American neopragmatism: Richard Rorty.</p> <p>13. Philosophy of science. Demarcation problem. Neopositivism and protocol sentences. Problem of induction. Quine-Duhem theorem applied to sciences. Karl Poppers falsification program. Henri Poincaré and Kazimierz Ajdukiewicz on conventionalism.</p> <p>14. Thomas Samuel Kuhn on scientific revolution. Concept of paradigm. Classical and non-classical sociology of knowledge. Science and technology studies. Bruno Latour on technology and non-human agency. Expert and layman knowledge.</p> <p>15. Summary and final test.</p>											
Prerequisites and co-requisites	No recommendations											
Assessment methods and criteria	<table border="1" data-bbox="451 860 1487 965"> <thead> <tr> <th data-bbox="451 860 794 898">Subject passing criteria</th> <th data-bbox="794 860 1137 898">Passing threshold</th> <th data-bbox="1137 860 1487 898">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="451 898 794 927">Final test</td> <td data-bbox="794 898 1137 927">50.0%</td> <td data-bbox="1137 898 1487 927">60.0%</td> </tr> <tr> <td data-bbox="451 927 794 965">Participation in the classes</td> <td data-bbox="794 927 1137 965">50.0%</td> <td data-bbox="1137 927 1487 965">40.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Final test	50.0%	60.0%	Participation in the classes	50.0%	40.0%
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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 correspondence theory of truth.
Work placement	Not applicable

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