University of Gdańsk

Subject card

Subject name and code	Logic - lecture, PG_00193063		
Field of study	Geology		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Optional subject group Humanistic-social subject group
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Division of Logic, Philosophy of Science and Epistemology -> Institute of Philosophy -> Faculty of Social Sciences -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Tomasz Kąkol	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	0.0	15

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	15	1.0	9.0	25

Subject objectives

To familiarize the student with the basics of logic: the place of logic in the system of sciences and, using the example of the simplest logical system - the classical sentential calculus - with the basic logical and metatheoretical issues of formal logic, as well as practical skills - translation of natural language into formalized language and vice versa, checking the tautologicality of formulas and the soundness of reasoning.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOLL3_W02] knows and understands the terminology appropriate in science and natural sciences	Has basic knowledge of the place and role of logic in relation to the sciences, as well as of the subject matter and methodological specificity of logic; knows basic logical terminology in Polish; knows basic research methods and argumentation strategies relevant to logic.	[SW4] test/exam - oral or written
[GEOLL3_U02] has the skill of analytical and synthetic way of reasoning leading to correct inference based on the results obtained or the facts presented	knows the scope of his/her knowledge and skills, understands the need for continuous education and professional development; correctly applies the learned terminology; analyzes arguments in the field of logic.	[SU4] test/exam - oral or written

Subject contents

The ambiguity of the term logic, the place of logic in the system of sciences, the simplest logical system and its metatheory: the classical sentential calculus (CSC) - language, truth functions, logical valuations, tautologies, laws vs. rules, semantic theorems of substitution and detachment, proof of the non-contradiction of the CSC, the concept of proof and logical consequence. Translation of natural language into formal language and back, checking the tautologicality of formulas and soundness of reasoning.

Prerequisites and co-requisites

<table>
<tr><td>Assessment methods and criteria</td><td colspan="3"><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>test/exam - oral or written</td><td>51.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td colspan="2">Batóg T., "Podstawy logiki" [only Classic Sentential Calculus], Poznań 1994</td></tr>
<tr><td>Supplementary literature</td><td colspan="2">Stanosz, B., "Ćwiczenia z logiki", any edition</td></tr>
<tr><td>eResources addresses</td><td colspan="2"></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="3">Translation of natural language into formal language and back, checking the tautologicality of formulas and soundness of reasoning.</td></tr>
<tr><td>Work placement</td><td colspan="3">Not applicable</td></tr>
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