University of Gdańsk

Subject card

Subject name and code	Elementary connections between algebra, geometry and topology, PG_00170079		
Field of study	Mathematics		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	Master's studies	Subject group	Optional 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	2	ECTS credits	5.0
Learning profile	academic	Assessment form	credit
Conducting unit	Institute of Mathematics -> Faculty of Mathematics, Physics and Informatics -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. Andrzej Szczepański	
	Teachers	prof. dr hab. Andrzej Szczepański	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	0.0	0.0	30.0	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	5.0	90.0	125

Subject objectives	The goal is preparing students to write master thesis.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[MATMU2_K05] is ready to independently search for information in literature, also in foreign languages	N/A	[SK2] presentation/project/paper/ report
[MATMU2_K01] is willing to acknowledge the limitations of his or her own knowledge and is willing to pursue further education	N/A	[SK8] observation of student's independent or team work
[MATMU2_U03] can understand mathematical texts of various types from selected fields of mathematics	N/A	[SU2] presentation/project/paper/ report
[MATMU2_U04] is able, at an advanced level and including modern mathematics, to apply and present, orally and in writing, methods of at least one selected branch of mathematics	N/A	[SU2] presentation/project/paper/ report
[MATMU2_W07] knows and understands the basic legal and ethical conditions related to scientific and teaching activities	N/A	[SW1] oral statement/ conversation/discussion
[MATMU2_U09] can prepare oral presentations in-depth in Polish and at least one foreign language, in a selected field of mathematics	N/A	[SU2] presentation/project/paper/ report
[MATMU2_K02] is ready to precisely formulate questions to deepen his/her understanding of a given topic or find missing elements of reasoning	N/A	[SK1] oral statement/conversation/ discussion
[MATMU2_W03] knows and understands in-depth a selected field of theoretical or applied mathematics and is able to understand the formulations of issues in this field that are still at the research stage and knows the connections of issues in this field with other areas of mathematics	N/A	[SW2] presentation/project/paper/ report
[MATMU2_U05] can perform proofs in a selected field and, if necessary, also use tools from other areas of mathematics	N/A	[SU2] presentation/project/paper/ report
[MATMU2_K06] is ready to formulate opinions on basic mathematical issues	N/A	[SK1] oral statement/conversation/ discussion
[MATMU2_K04] is ready to understand and appreciate the importance of intellectual honesty in one's own and other people's actions; ethical conduct	N/A	[SK8] observation of student's independent or team work
[MATMU2_U02] can express mathematical content in speech and writing, in mathematical texts of various nature	N/A	[SU2] presentation/project/paper/ report
[MATMU2_U07] is able to define his/her interests and develop them; in particular, is able to establish contact with specialists in his/her field, e.g. understand their lectures intended for young mathematicians	N/A	[SU1] oral statement/conversation/ discussion
[MATMU2_U08] is able to prepare in-depth written works in Polish and at least one foreign language in a selected field of mathematics	N/A	[SU2] presentation/project/paper/ report

Subject contents

N/A

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
lecture	50.0%	100.0%
n/a	100.0%	0.0%

Recommended reading	Basic literature	• A. Białynicki-Birula: Zarys algebry, PWN, 1987 • H. Weyl: Symetria, Prószyński i spółka, 1997 (lub PWN 1960) • M. Davis: The geometry and topology of Coxeter groups, Princeton University Press - 2008
	Supplementary literature	Determined individually with students
	eResources addresses	
Example issues/ example questions/ tasks being completed	n/a	
Work placement	Not applicable	

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