University of Gdańsk

Subject card

Subject name and code	Didactics of Mathematics in Elementary School I, PG_00204268		
Field of study	Mathematics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Optional subject group Subject group related to scientific research in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	5	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Division of Didactics of Mathematics -> Institute of Mathematics -> Faculty of Mathematics, Physics and Informatics -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Elżbieta Mrożek	
	Teachers		

Lesson types

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	1.0	19.0	50

Subject objectives

The aim of the course is to prepare students in the field of mathematics didactics to teach mathematics in primary school.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[MATL3_K01] is ready to acquire knowledge in order to solve cognitive and practical problems related to the field of mathematics and to use the opinions and assistance of experts	The student is ready to form the habit of systematic learning and using various sources of knowledge (including the Internet) and to learn throughout life.	[SK1] oral statement/conversation/ discussion [SK8] observation of student's independent or team work

Subject contents	1. Teaching mathematics in relation to mathematics as a scientific discipline. 2. Core curriculum. Objectives and content of teaching mathematics in primary school. 3. Review of mathematics curricula and school textbooks. Criteria for assessing school curricula and textbooks. 4. Methods and forms of teaching mathematics. Unconventional teaching methods, e.g. project method, activating methods. 5. Planning didactic work - creating lesson and extracurricular lesson scenarios, material breakdowns, teaching programs. 6. Teaching elements of the mathematical method and the stage of the student's mental development. 7. Shaping mathematical concepts related to natural, integer, rational numbers. 8. Methodology of solving tasks, including tasks with an increased level of difficulty for gifted students. 9. Teaching aids in teaching mathematics, including the use of media and information and communication technologies. 10. Popularization of mathematics in the school and extracurricular environment.
Prerequisites and co-requisites	

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
aktivity	51.0%	20.0%
project	51.0%	20.0%
test	51.0%	60.0%
observation of the student's attitude	51.0%	0.0%

Recommended reading

Basic literature	1. Polya, G.: Jak to rozwiązać?, Wydawnictwo Naukowe PWN, Warszawa. 2. Semadeni, Z.(red.): Nauczanie początkowe matematyki, WSiP, Warszawa, t.I - 1981, t.II - 1984, t.III - 1986, t.IV - 1988. 3. Turnau, S.: Wykłady o nauczaniu matematyki, PWN, Warszawa, 1991. 4. Zaremba, D.: Podstawy nauczania matematyki, czyli jak matematykę przybliżyć uczniom, Wydawnictwa Naukowo-Techniczne, Warszawa, 2006. 5. Zaremba, D.: Sztuka nauczania matematyki w szkole podstawowej i gimnazjum, GWO, Gdańsk, 2004. 6. Programs and textbooks for teaching mathematics in primary school. 7. Collections of tasks with an increased level of difficulty. 8. Multimedia resources for teaching mathematics in primary school - multi-textbooks, films, interactive exercises, etc. 9. Articles from selected magazines for teacher (,,Dydaktyka Matematyki" ,,Matematyka", ,,Matematyka w Szkole", ,,Nauczyciele i Matematyka plus Technologia Informacyjna" i itp.). 10. Websites with materials for teachers, including popular educational publications, ORE, discussion forums, etc. 11. MEN Regulations - regarding the organization of mathematics teaching, selection of school programs and textbooks, assessment and examination of students, professional advancement of teachers.
Supplementary literature	not included
eResources addresses	

Example issues/ example questions/ tasks being completed	not included
Work placement	Not applicable

Document generated electronically. Does not require a seal or signature.