University of Gdańsk

Subject card

Subject name and code	Astronomical Principles of Geography - laboratory, PG_00199800						
Field of study	Geography						
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			
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 Atomic and Molecular Spectroscopy and Astrophysics -> Institute of Theoretical Physics and Astrophysics -> Faculty of Mathematics, Physics and Informatics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Piotr Gnaciński					
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	10.0	0.0	0.0	10
	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	10		2.0	13.0	25	
Subject objectives	Students should know the determination of geographic coordinates, time zones, and be able to calculate sunrises and sunsets.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GEOGRL3-U03] can plan and conduct, independently and as part of a team, simple research in the field of geography under the supervision of a scientific advisor, based on the necessary information from professional literature and other sources	The student is able to use a rotating sky map.	[SU6] demonstration of practical skills
[GEOGRL3-U02] can use theoretical knowledge in the field of geography and available sources of information to correctly interpret basic natural, social, economic, and political processes and phenomena	The student understands the origin of time zones and polar nights and days.	[SU1] oral statement/conversation/ discussion
[GEOGRL3-W02] knows and understands key concepts and theories in geography, as well as advanced processes and phenomena related to spatial diversity and the distribution of processes and phenomena on the Earth's surface at various spatial scales, particularly in Poland	The student is able to determine geographic coordinates based on astronomical data.	[SW4] test/exam - oral or written
[GEOGRL3-W04] has advanced knowledge of the Earth's geographical environment, understood as a unified system of interconnected and interacting components; its diversity, functioning, and dynamics of change, including the interaction of environmental components in the area of the South Baltic Coast and Lake District	The student is able to calculate the time of sunrise and sunset.	[SW4] test/exam - oral or written

Subject contents

1. Spherical triangles.

2. Rotating map of the sky.

3 Determination of geographical coordinates.

4 Calculation of sunrises and sunsets.

5. Determination of white nights and polar nights and days.

Prerequisites and co-requisites

Knowledge of mathematics: order of operations, trigonometric functions and radian.
Knowledge of how to use a scientific calculator.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
practical exercises assessment	51.0%	30.0%
oral statement assessment	51.0%	10.0%
final test	51.0%	60.0%

Recommended reading

Basic literature	Kreiner J.M., 2009, Ziemia i Wszechświat - astronomia nie tylko dla geografów, Wydawnictwo Naukowe Uniwersytetu Pedagogicznego - Kraków Mietelski J., 2001, Astronomia w geografii, Wydawnictwo Naukowe PWN, Warszawa.
Supplementary literature	Rybka E., 1983, Astronomia ogólna, PWN, Warszawa
eResources addresses	

Example issues/ example questions/ tasks being completed

Work placement

Not applicable

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