University of Gdańsk

Subject card

Subject name and code	Copy Hydrophysics - laboratory exercises, PG_00091497		
Field of study	Water Management and Protection of Water Resources		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
Education level	undergraduate studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study Subject group related to practical vocational preparation
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	1.0
Learning profile	practical	Assessment form	
Conducting unit	Katedra Geofizyki -> Faculty of Oceanography and Geography		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Marcin Paszkuta	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	15.0	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	2.0	3.0	20

Subject objectives

1 To familiarise students with basic physical phenomena and processes, the laws governing them and the methods of their study.
2. To learn and understand the basic laws responsible for physical phenomena occurring in the hydrosphere.
3. To impart knowledge and develop skills necessary to:
- to use mathematical apparatus to describe physical phenomena;
- to make natural observations, to analyse and interpret them.
4. To lay the foundations for the effective study of further courses

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GWOZWL3-K05] take responsibility for the safety of their own work and that of others, dealing with emergencies, exercising caution in the laboratory and in the field, responsibility for entrusted equipment and apparatus	K_K05 - Is willing to take responsibility for work safety and to be careful in the laboratory and for the equipment and apparatus entrusted to him/her (Ref. Content - point B3)	[SK8] observation of student's independent or team work
[GWOZWL3-U16] demonstrate creativity in working independently and in team, taking on a variety of roles, including a leadership role	K_U01 - Able to carry out basic observations of physical processes and phenomena in the laboratory (related to content - point B3)	[SU1] oral statement/conversation/ discussion
[GWOZWL3-U02] select and independently apply basic research techniques and tools, with adhering to established analytical procedures in the field of environmental research in water management, adequately to the considered research problem	K_U07 - Able to use the literature and other available sources of information in physics and to select and critically evaluate information (concerning content substantive content - para. A1, B1 and B3)	[SU6] demonstration of practical skills
[GWOZWL3-U07] use literature and other available sources of information, including information technology, multimedia, Internet, databases, and select and critically evaluate information	K_U02 - Can select and independently apply basic research techniques and tools, with established analytical procedures, in environmental research in water management	[SU2] presentation/project/paper/ report
[GWOZWL3-U01] make basic observations of processes and phenomena occurring in the hydrosphere and carry out basic measurements of selected processes of water purification on a laboratory scale	K_U16 - Can demonstrate creativity in working independently and in teams, taking on different roles	[SU8] observation of student's independent or team work

Subject contents

B3. Laboratory (15 hours):
B.3.1 Laboratory measurements and measurement uncertainty rasch.
B.3.2 Laboratory exercises will address selected topics listed in A.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
report	51.0%	100.0%

Recommended reading

Basic literature	1. Szydłowski H. [red.], 1981, Teoria pomiarów, PWN Warszawa.
Supplementary literature	1. D. Halliday, R. Resnick, J. Walker,*Podstawy Fizyki,* Wydawnictwo Naukowe PWN, W-wa 2003
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed

Dynamics:
1. coefficient of friction;
2. mathematical pendulum.

Heat:
3. specific heat;
4. the time constant of a thermometer.

Selected macroscopic properties of matter:
5. speed of sound;
6. gas constant.

Work placement

Not applicable

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