KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego

UNIA EUROPEJSKA
EUROPEJSKI
FUNDUSZ SPOŁECZNY

Course title	ECTS code
Meteorology and climatology	7.2.0570

Name of unit administrating study

Faculty of Oceanography and Geography

Studies

faculty	field of study		
Wydział Chemii	Ochrona środowiska	type	pierwszego stopnia
		form	stacjonarne
		specialty	Podstawowa
		specialization	Podstawowa

Teaching staff

dr Mirosława Malinowska; prof. dr hab. Mirosław Miętus; dr Małgorzata Owczarek

Forms of classes, the realization and number of hours

Forms of classes

Auditorium classes, Lecture

The realization of activities

classes outside UG premises, classroom instruction

Number of hours

Lecture: 15 hours, Auditorium classes: 30 hours

ECTS credits

4
15 h of lecture - 0,5 ECTS
30 h of audytorium classes - 1 ECTS
15 h of tutorial classes - 0,5 ECTS
50 h of student's own work - 2 ECTS
TOTAL: 110 h - 4 ECTS

The academic cycle

2023/2024 summer semester

Type of course

obligatory

Language of instruction

Polish

Teaching methods

- group work
- multimedia-based lecture
- problem solving
- project-based method (research, implementation, practical project)

Form and method of assessment and basic criteria for eveluation or examination requirements

Final evaluation

- Graded credit
- Examination

Assessment methods

- ssignment work – conducting research and presenting results
- written exam with open questions
- assignment work – project or presentation
- assignment work – completing a specific practical assignment
- written exam (test)
- oral course credit

The basic criteria for evaluation

The basic criteria for evaluation
A lecture: Obtaining a positive mark from the examination, reflecting the achievement of the assumed educational results in the scope of knowledge, skills and competences of the student.
Exercises: timeliness, completeness and correctness of the tasks performed, obtaining a positive assessment of all the tasks performed within the framework of the exercises and positive assessments of the colloquia.

Method of verifying required learning outcomes

Required courses and introductory requirements

A. Formal requirements

B. Prerequisites

Required courses and introductory requirements
Basic knowledge in mathematics and statistic

Basic knowledge about atmosphere from geography, about ideal gases physics on the level of secondary school

Aims of education

Aims of education
Lecture: basic knowledge about the atmosphere and its processes. Recognition and interpretation of meteorological phenomena and processes in connection with the state of the natural environment. Determination of the effects of weather conditions on the geographical environment, economy and human health.
Exercises: getting to know basic sources of information in meteorology and climatology. Learning the main principles and objectives of meteorological observations. The ability to preliminarily process meteorological data and analyse climatological time series.

Course contents

Course contents
A. Lecture's problems
A.1. Subjects of meteorological and climatological research
A.2. Atmosphere (its structure and characteristics, antropogenic changes of atmospheric components)
A.3. Radiation of the Sun, the Earth and its atmosphere
A.4. Heat balance of the Earth surface
A.5. Water in the atmosphere
A.6. Adiabatic processes
A.7. Atmospheric circulation
A.8. Selected issues of climatology (climatic processes and factors, local climate features, zonal and non-zonal climatic factors, climate of Poland, global climate change)
B. Task's problems
B.1. Organization of meteorological observation networks in Poland
B.2. Basic sources of data in climatology
B.3. Meteorological elements – basic information about methods of observation and data processing
B.4. Basic statistical and graphical methods of data processing in meteorology.

Bibliography of literature

Bibliography of literature
Literature required to pass the course
Kożuchowski K., 1998. Atmosfera, klimat, ekoklimat. Wydawnictwo Naukowe PWN.
Kożuchowski K. (red), 2005, Meteorologia i Klimatologia, PWN
Woś A., 2000. Meteorologia dla geografów. Wydawnictwo Naukowe PWN.
Extracurricular readings
Bac S., Koźmiński C., Rojek M., 1998. Agrometeorologia. Wydawnictwo Naukowe PWN.
Kożuchowski K., 2011, Klimat Polski. Nowe spojrzenie, PWN
Lorenc H. (red), 2005, Atlas klimatu Polski, IMGW.
Martyn D., 2000, Klimaty kuli ziemskiej, PWN
Niedźwiedź T. (red.), 2003 Słownik meteorologiczny. PWN.
Schoenwiese Ch-D., 1997. Klimat i człowiek. Prószyński i S-ka.
Pruchnicki J., 1989. Metody opracowań klimatologicznych. PWN.
Ustrnul Z., Czekierda D., 2009, Atlas ekstremalnych zjawisk meteorologicznych oraz sytuacji synoptycznych w Polsce, IMGW
Woś A., 1999. Klimat Polski. Wydawnictwo Naukowe PWN.
Woś A., 2010. Klimat Polski w drugiej połowie XX wieku. Wydawnictwo Naukowe UAM.

The learning outcomes (for the field of study and specialization)	Knowledge
	Skills
	Social competence

Contact

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