Meteorology and Climatology - course description

General information

Course name	Meteorology and Climatology
Course ID	07.7-WB-OS2P-Meterol-S17
Faculty	Faculty of Biological Sciences
Field of study	Environmental Protection
Education profile	academic
Level of studies	First-cycle studies leading to Bachelor's degree
Beginning semester	winter term 2021/2022

Course information

Semester	5
ECTS credits to win	2
Course type	obligatory
Teaching language	english
Author of syllabus	• prof. dr hab. Leszek Jerzak

Classes forms

The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Lecture	15	1	-	-	Credit with grade

Aim of the course

The aim of the course is to acquire the skills to observe the surrounding atmosphere, the interpretation of the phenomena and processes occurring in it. Students are able to identify threats to the state of the atmosphere and properly use the results of these observations. Students learn basic skills and techniques of measuring instruments, to assess the reliability and relevance of the data, the use of source materials: meteorological, climatological and competent their development.

Prerequisites

basics of physics, chemistry, geography and biology.

Scope

The program of lectures: The object and purpose of the research and development of climatological weather. The Earth's atmosphere, solar radiation in the atmosphere. The balance of radiation. Field air pressure and wind. Air masses and fronts. Climatic factors and plant vegetation. Phenology. Synoptic Meteorology. Forecasting the weather conditions. Polish climatic conditions and its regions. Laboratory program: Design, operation and maintenance of basic measuring instruments. The methodology of measurements and the development of measurements and observations. Assess the reliability and relevance of the data. The use of source materials climatology.

Teaching methods

Remote Lecture: information - problem. Laboratory exercises, demonstration and discussion.

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
able to prepare and present in the Polish language oral presentation concerning the specific issues being studied ranges direction measurement stations can design basic meteorological parameters, and correctly use measuring equipment. able to interpret the phenomena occurring in the atmosphere, in conjunction with changes in atmospheric pressure and identify the risks of disturbance of general circulation of the atmosphere. Student is able to assess the impact of the atmospheric environment of life on Earth.	• K1A_W84	• a pass - oral, descriptive, test and other	• Lecture
can use the ready-made library of meteorological data without violating someone else's intellectual property (IMGW), is aware of the importance of accuracy of meteorological measurements. The student is aware of the obligation to care for the environment clean	• K1A_W85 • K1A_U63 • K1A_U64 • K1A_K36	• a pass - oral, descriptive, test and other	• Lecture
able to define the basic concepts of meteorology and climatology, and can use the language specialist in the field of meteorology. can call the phenomena occurring in the atmosphere, can explain the basics of radiation and energy processes in the atmosphere and characterize the radiation balance and heat balance of the earth's surface - atmosphere.	• K1A_W85	• a pass - oral, descriptive, test and other	• Lecture

Assignment conditions

A lecture - pass the exam with a positive mark.

Recommended reading

- Bac S., Rojek M. Meteorologia i klimatologia w inżynierii środowiska. Wydawnictwo AR. Wrocław 1999
- Kossowska-Cezak U., Martyn D., Olszewski K., Kopacz-Lembowicz M. Meteorologia i klimatologia: Pomiary, obserwacje, opracowania. PWN. Warszawa 2000.
- Kossowska - Cezak U. Wstęp do meteorologii i klimatologii. Wydawnictwo UW. Warszawa 2000.
- Woś A. ABC meteorologii. PWN. Warszawa 2004.
- Dunlop Storm. Dictionary of weather. Oxford University Press.2008.

Further reading

- Bac S., Koźmiński C., Rojek M. Agrometeorologia. PWN. Warszawa 1998.
- Kędziora A. Podstawy agrometeorologii. PWRiL. Warszawa 1999.
- Woś A. Meteorologia dla geografów. PWN. Warszawa 2002.

Notes

Modified by dr Olaf Ciebiera (last modification: 19-05-2021 22:02)