

**01S1-AGROM**

**AGROMETEOROLOGY**

**ECTS: 3.0**

**HOURS PER SEMESTER/WEEK:** LECTURES: 15/1; CLASSES: 30/2

**COURSE CONTENTS**

**LECTURES:** Earth's atmosphere - composition, structure, meaning. Solar radiation, radiation balances. Heat and temperature, heat balance. Phase transitions of water. Atmospheric circulation. Processes and weather factors. Weather harmful phenomena in agriculture. Climate system. Factors shaping the climate, division into climatic zones. Climate and agroclimate of Poland - characteristics, valorization. Climate change and its impact on agriculture - threats, challenges, adaptation. Agrometeorological protection

**CLASSES:** Principles of conducting meteorological observations and measurements. Solar radiation, air and soil temperature, evaporation and humidity, precipitation, atmospheric pressure, winds - characteristics, methods of measurement, instruments, calculation of quantities and their interpretation, importance in agricultural production. Synoptics, agrometeorological forecasts. Calculations of agro-meteorological indices

**EDUCATIONAL PURPOSE:** Introduction to the basic concepts and processes associated with the functioning of the climate system. Characteristics of meteorological elements and their importance in the process of agricultural production.

**LEARNING OUTCOMES**

**Knowledge.** The student has knowledge of weather and climate phenomena and processes. He characterizes adverse weather phenomena in agriculture.

**Skills.** Students can characterize meteorological elements. Assesses the status of existing meteorological conditions in terms of plant climatic requirements. Is able to use specialized instruments and gauges to measure meteorological elements

**Social competences.** The student is aware of his knowledge and understands the need for constant education in the field of processes and phenomena concerning weather and climate and their influence on crops. He prepares responsibly to his tasks. He or she is able to work in a team.

**TEACHING FORMS AND METHODS**

**Lectures.** Information lecture with multimedia presentation.

**Classes.** Auditorium exercises: presentation method, case study.

**FORM AND CONDITIONS FOR VERIFICATION OF LEARNING OUTCOMES**

**Lectures.** Written test - credit with a grade.

**Classes.** Field and auditorium classes: presentation method, case study.

**BASIC LITERATURE**

1) A. Kędziora 1999. Podstawy Agrometeorologii, Wyd.PWRiL Poznań 2000. 2) A. Woś, 2000, Meteorologia dla geografów. Wyd. PWN Warszawa. 3) Kożuchowski K, 2005, Meteorologia i Klimatologia, PWN Warszawa.

**ADDITIONAL LITERATURE**

1) Ćwiczenia z meteorologii, Wyd. SGGW. Warszawa 2009. 2) Kossowska-Cezak, Martyn, Olszewski, 2003 Meteorologia i Klimatologia, pomiary, obserwacje, opracowania PWN Warszawa

**THE TEACHER/S CONDUCTING THE CLASSES:**

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