

Course title: DIVERSITY OF PROTISTA AND FUNGI

ECTS credit allocation (and other scores): 3

Semester: winter (starts in mid-February)

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Natural sciences

Language: English

Number of hours per semester: 45 h.

Course coordinator/ Department and e-mail: Ewa Sucharzewska, Department of Microbiology and Mycology;
ewko@uwm.edu.pl

Type of classes: classes (30 h) and lectures (15 h)

Substantive content

CLASSES: Macroscopic and microscopic analysis of the body organization of selected representatives of protists and fungi, diagnostic features and their significance, general characteristics of selected taxa - development cycles, biology and ecology of the most known species. Mycorrhiza - types and significance. Edible and poisonous mushrooms. Mushroom poisoning (mushroom toxins). Morphology and anatomy of lichen thalli, lichens as bioindicators.

LECTURES: Basics of classification and systematics of Protista and Fungi. General characteristics of selected taxonomic units - diagnostic features and species diversity. Fungal cell structure. Hyphae and mycelium differentiation. Chemistry and nutrition of fungi. Reproduction and spread of fungi. Diversity of fungal fruiting bodies and their importance in species identification. The importance and role of fungi and protists in nature and human life. Relationships between fungi and other organisms. Origin and evolutionary trends of fungi. Threat and protection of fungi.

LEARNING PURPOSE: To provide a basic understanding of the biology and ecology and the diversity of fungi and protists. After completing the course, the student should be able to: indicate the features common to all protists and fungi; characterize the main groups of protists and fungi; recognize common species and indicate their diagnostic features; explain their role and functions in natural ecosystems and indicate their positive or negative impact on human life.

On completion of the study programme the graduate will gain:

KNOWLEDGE: student describes the detailed structure and mechanisms of basic life processes of fungi and protists; describes their ecological requirements and taxonomic diversity in various ecosystems.

SKILLS: student can recognize selected species of fungi and protists based on their diagnostic features.

SOCIAL COMPETENCIES: student knows the role and importance of fungi and protists in the natural environment and human life

Basic literature: 1.) Szweykowska A., Szweykowski J., Botanika, t. 2. Systematyka, Wyd. Wydawnictwo Naukowe PWN, R. 2003-2024. 2.) Łuszczynski J., Przewodnik do ćwiczeń z mikologii, Wyd. Akademii Świętokrzyskiej, Kielce, R. 2002. 3.) Turnau K., Stengl A., Botanika systematyczna, cz. 1-2. Skrypt do ćwiczeń, Wyd. Uniwersytetu Jagiellońskiego, Kraków, R. 1996.

Supplementary literature: 1.) Webster J., Weber R.W.S. , Introduction to Fungi, wyd. Cambridge University Press, 2007. 2.) Kendrick B. , The Fifth Kingdom : An Introduction to Mycology, wyd. Indianapolis, Hackett Publishing Company, 2017. 3.) Lee R. E. , Phycology, wyd. Cambridge University Press, 2008.

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 46 h.

Student's independent work: 29 h.