



Course title: Sanitary microbiology in tourism

ECTS credit allocation (and other scores): 2.0 ECTS

Semester: autumn

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

Branch of science: Natural sciences

Language: English

Number of hours per semester: 15/15

Course coordinator/ Department and e-mail: prof. dr hab. inż. Ewa Korzeniewska; ewakmikr@uwm.edu.pl

Type of classes: classes and lectures

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#### Substantive content

**CLASSES:** Isolation of microorganisms from various natural environments as well as from skin (hands) and human mucous membranes. Assessment of their biodiversity (macroscopic and microscopic observations), effectiveness of disinfectants, antibiotic resistance. Sanitary and bacteriological assessment of bathing water, swimming pools. Understanding the principles of identifying pathogenic bacteria that create the most common food poisoning (*Salmonella* spp.). Microbiological assessment of the air quality of rooms used for agritourism purposes.

**LECTURES:** Transmission of pathogenic microorganisms (bacteria, viruses and fungi and protozoa) in natural environments used for recreational purposes. Basic information on medical microbiology, routes of infection, exo- and endotoxins, new pathogens. Sanitary and bacteriological quality of water used for recreational purposes. Assessment of microbiological safety of water used for domestic purposes in agritourism facilities. Microbiological air pollution inside living quarters of various usability. Sanitary and bacteriological aspects of wastewater treatment in household wastewater treatment plants. The mechanism of action of disinfectants on microorganisms.

**Learning purpose:** Understanding the biodiversity of microorganisms posing a threat to humans in domestic premises and natural environments

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On completion of the study programme the graduate will gain:

**Knowledge:** Has a basic knowledge of microorganisms present in environments used for recreational purposes

**Skills:** Perform simple analysis related to sanitary monitoring in the field or laboratory

**Social Competencies:** Is able to reach for the help of other specialists in solving emerging problems related to sanitary pollution of tourism and recreational facilities

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**Basic literature:** 1) Tortora G.J., Funke B.R., Case C.L., *Microbiology an Introduction*, Eight Edition, wyd. PEARSON Benjamin Cummings, 2004, s. 898; 4) Salyers A. A., D.D. Whitt, *Mikrobiologia. Różnorodność, chorobotwórczość i środowisko*, wyd. PWN, Warszawa, 2005, s. 608

**Supplementary literature:** 1) Błaszczuk M.K., *Mikrobiologia środowiska*, wyd. PWN, 2010, s. 400; 2) Schlegel H.G., *Mikrobiologia ogólna*, wyd. PWRiL, 2003, s. 681; 3) Zmysłowska I., *Mikrobiologia ogólna i środowiskowa*, wyd. UWM w Olsztynie, 2009, s. 206

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The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 1.28

Student's independent work: 0.72