COURSE DESCRIPTION (SYLLABUS)

1.	Course: **Microbiology and Health**
2.	Language of instruction: **English**
3.	Faculty: **Faculty of Biotechnology**
4.	Course/module code: **29-BT-S1-E5-EnMZ**
5.	Course/module type (*mandatory* or *elective*): **elective**
6.	Programme: **Biotechnology**
7.	Study cycle (*1st/2nd*): **1st**
8.	Year: **3rd**
9.	Semester *(autumn* or *spring)* **autumn**
10.	Form of tuition and number of hours: Lecture: **15 h** Learning methods: **Attendance at lectures (listening and assimilation of knowledge), commitment (ability to ask questions to the teacher), activity (preparation for the lecture according to recommended issues and sources).**
11.	Coordinator(s): **Dorota Dziadkowiec, PhD**
12.	Initial requirements (knowledge, skills, social competences): **Basic knowledge of biochemistry and microbiology.**
13.	Objectives: **Gaining basic knowledge about the influence of human natural intestinal flora on health; examples of pathogenic microorganisms both *Pro*- and *Eukaryotic*, with the emphasis on their route of transmission (vectors).**
14.	Content: **1. Components of human natural intestinal flora and their role in the development of immune system.**

<table>
<tr><td></td><td colspan="2">2. Division of pathogenic microorganisms according to their transmission route: soil (tetanus) and water born (cholera) infections, infections transmitted by insects (malaria) and ticks (Lyme Disease).
3. Ways of preventing infections.
4. Main human parasites - ways of transmission, preventing infection.
5. Opportunistic pathogens and emerging diseases - reasons of occurrence, ways of preventing infections.</td></tr>
<tr><td>1.</td><td>Learning outcomes:

Student:
• can make a qualitative and quantitative description of the basic microbiological phenomena and processes;
• is able to link theoretical knowledge of microbiology, microbial biochemistry and biotechnology, with its practical application in health care;
• reads and understands the scientific literature in the field of biochemistry, biotechnology, molecular biology and microbiology in English;
• understands the need for continuing education throughout the whole life, including deepening knowledge in biological sciences.</td><td>Outcome symbols:

K1_W01

K1_W09

K1_U03

K1_K01</td></tr>
<tr><td>2.</td><td colspan="2">Obligatory and recommended literature:
• Madigan, Martinko, Stahl, Clark (2011) Brock Biology of Microorganisms. Pearson.</td></tr>
<tr><td>3.</td><td colspan="2">Methods of verification of the assumed learning outcomes:
written test</td></tr>
<tr><td>4.</td><td colspan="2">Conditions of earning credits:
positive test result</td></tr>
<tr><td rowspan="6">5.</td><td colspan="2">Student’s workload:</td></tr>
<tr><td>Activity</td><td>Number of hours for the activity</td></tr>
<tr><td>Hours of instruction (as stipulated in study programme):
• lecture: 15 h
• consultations: 5 h</td><td>20 h</td></tr>
<tr><td>Student’s own work:
• reading the literature
• preparation for the test</td><td>20 h</td></tr>
<tr><td>Total number of hours</td><td>40 h</td></tr>
<tr><td>Number of ECTS</td><td>2 ECTS</td></tr>
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