

# **Microbiology II**

ECTS: 6.00

### SUBJECT MATTER CONTENT

### **TEACHING OBJECTIVE**

Acquiring the basic knowledge of the morphology and physiology of bacteria, viruses, fungi and prions. Understanding the mechanisms of pathogenic action of these microorganisms.

DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:

Symbols for outcomes related to the discipline:

R/WA\_P7S+++

Symbols for outcomes related to the field of study:

A.W17. +, K.1.+, B.U6. +, A.W10. +, A.U14. +, A.W15. ++, K.11.+, K.4.+, A.U2. +, K.9.+, A.U16. +, A.W18. +, A.U10. ++, A.U12. +, K.5+, K.2.+, A.W12. +, K.8.+

### LEARNING OUTCOMES:

#### **Knowledge:**

W1 – Student knows and understands methods of prevention and therapy in viral, bacterial and fungal infections.

W2 – Describes and lists the steps in the course of the examination proceedings, since sampling to full identification.

W3 – Knows the basics of microbiological diagnostics.

#### Skills:

U1 – Can perform basic microbiological diagnostic.

U2 – Applies appropriate techniques of isolation and identification of pathogenic viruses, bacteria and fungi.

U3 – Can establish primary cell cultures, passage cell lines, infect cells and proprly evaluate viral CPE.

#### Social competence:

K1 – Is ready to take responsibility for the decisions taken towards human beings, animals and environment.

K2 – Is aware of potential hazards to health and life caused by pathogenic viruses, bacteria and fungi.

K3 – Understands the need for continuous learning and skill improvement.

K4 - Complies with bioethics and professional ethics.

### TEACHING FORMS AND METHODS:

Lecture(W1;K1;K2;K3;K4;):Multimedia presentation.

#### Legal acts specifying learning outcomes: 682/2020 Disciplines: Veterinary science Status of the course: Obligatoryjny Group of courses: A - przedmioty podstawowe Code: ISCED 0841 Field of study: Veterinary Medicine Scope of education: Profile of education: General academic Form of studies: full-time Level of studies: uniform master's studies Year/semester: 2/4

Types of classes: Lecture, Laboratory classes, Classes Number of hours in semester:Lecture: 30.00, Laboratory classes: 6.00, Classes: 39.00 Language of instruction:Polish Introductory subject: Microbiology I Prerequisites: Basic knowledge of general microbiology.

Name of the organisational unit conducting the course:Katedra Mikrobiologii i Immunologii Klinicznej Person responsible for the realization of the course:dr hab. wet. Joanna Małaczewska, prof. UWM e-mail: joanna.malaczewska@uwm.edu.pl

Additional remarks:

Laboratory classes(W2;U1;U2;U3;K1;K2;K3;K4;):Independent work with biological material under the supervision of the teacher.

Classes(W2;W3;U1;U2;K1;K2;K3;K4;):Theoretical introduction to classes (multimedia presentation) and practical work with material.

## FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:

Lecture (Written exam) - To pass the final exam not less than 65% of possible points should be obtained. The grading is based on the principles described in the faculty procedure "Principles of grading students". A student may take the exam improvement twice. In case of top-down suspension of stationary classes and the need for distance learning, the methods of verifying the achievement of learning outcomes declared in the syllabus, i.e. forms of passing the exam and classes, may change in a manner appropriate to the situation. -

Laboratory classes (Evaluation of the work and cooperation in the group) - Attendance in practical classes and independent performance of laboratory procedures are the basis of the pass. -

Classes (Colloquium test) - Three written tests are planned per semester, based on which the final grade for the classes is determined. To pass the colloquium, obtaining min. 65% of possible points is necessary. The grading is based on the principles described in the faculty procedure "Principles of grading students". A student may attempt to improve colloquium twice. The condition for receiving the final pass is obtaining a pass from the colloquium held in the course of the classes. In case of top-down suspension of stationary classes and the need for distance learning, the methods of verifying the achievement of learning outcomes declared in the syllabus, i.e. forms of passing the exam and classes, may change in a manner appropriate to the situation.

### **BASIC LITERATURE:**

1. Zdzisław Larski, Marian Truszczyński, *Zarys mikrobiologii weterynaryjnej*, Wyd. Wydawnictwo ART, R. 1992

2. Bryan Markey, Finola Leonard, Marie Archambault, Ann Cullinane, Dores Maguire, *Clinical Veterinary Microbiology*, Wyd. Mosby Ltd., R. 2013

3. Konrad Malicki, Marian Binek, *Zarys klinicznej bakteriologii weterynaryjnej*, Tom 2, Wyd. Wydawnictwo SGGW, R. 2004

#### SUPPLEMENTARY LITERATURE: