



48SJ-EC-FVIR

ECTS: 0,5

YEAR: 2022Z

ELECTIVE COURSE - FUNDAMENTALS OF VIROLOGY

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**COURSE CONTENT
CLASSES**

* What is a virus? – virus definition and classification * History of virology * Methods to study viruses * Virus receptors, fusion and entry * Viral protein trafficking and processing * Routes of infection and infection patterns (acute, persistent, latent) * Viral pathogenesis * Immune responses to viral infections * Vaccines

LECTURES

EDUCATIONAL OBJECTIVE:

The purpose of the course is to teach the participants the principles of virology. More specifically, the class will educate about the definition of a virus and the steps of its replication cycle as well as about the consequences of infection i.e. diseases associated with different viral infections. The goal is also to familiarize the participants with the basic characteristics of different viral families and sensitize them to multitude and diversity of symptoms caused by viral infections.

DESCRIPTION OF LEARNING OUTCOMES FOR THE COURSE IN RELATION TO FIELD AND MAJOR LEARNING OUTCOMES

Codes of learning outcomes in a major field of study: M/NM+++,

Codes of learning outcomes in a major area of study: B.U10.+, C.U10.+, C.W11.+, C.W12.+, C.W13.+, C.W14.+, C.W18.+, C.W19.+, C.W20.+, D.U17.+, D.W18.+, D.W21.+, D.W22.+, E.W34.+, G.U2.+, K.5+,

LEARNING OUTCOMES:

Knowledge

W1 - C.W11. Knows the genetic mechanisms of acquiring drug resistance by microorganisms and cancer cells. C.W12. Is able to classify microorganisms, into those that are pathogenic and present in the physiological flora. C.W13. Knows the epidemiology of viral, bacterial, fungal and parasite infections, taking into account their geographical range of occurrence. C.W14. Is familiar with the effects of abiotic and biotic (viruses, bacteria) environmental factors on the body and population and the routes of their penetration into the human body; can describe the consequences of human exposure to various chemical and biological agents and the principles of exposure prevention. C.W18. Knows the symptoms of iatrogenic infections, their transmission routes and pathogens causing changes in individual organs. C.W19. Knows and understands the basics of microbiological and parasitological diagnostics. C.W20. Knows the basics of disinfection, sterilization and aseptic techniques. D.W18. Knows the principles of group work. D.W21. Knows the features of modern medicine and its most important discoveries. D.W22. Knows the process of formation of new medical disciplines and achievements of leading representatives of Polish and world medicine. E.W23. Knows environmental and epidemiological determinants of the most common human cancers. E.W34. Knows and understands the causes, symptoms, principles of diagnosis and therapeutic and prophylactic management in the most common bacterial, viral, parasitic and mycotic diseases, including pneumococcal infections, viral hepatitis, acquired immunodeficiency associated with AIDS, sepsis and hospital infections. G.W3. Is familiar with the epidemiology of infectious and chronic diseases, ways to prevent them at different stages of natural disease development and the role of epidemic surveillance.

Skills

U1 - B.U10. Uses databases, including web-based ones, and searches for information using available tools. C.U10. Interprets results of microbiological tests. D.U17. Critically analyzes medical literature, including literature in English, and draws conclusions based on the available literature. G.U2. Collects information about the presence of risk factors for infectious and chronic diseases and plans preventive measures at different levels .

Social competence

K1 - K5. Is aware of his own limitations and has the ability to constantly educate himself.

BASIC LITERATURE

1) Jane Flint, Vincent R. Racaniello, Glenn F. Rall, Anna Marie Skalka, Principles of Virology, wyd. ASM Press, 2015

SUPPLEMENTARY LITERATURE

1) David Kneipe, Peter Howley, Field's Virology, wyd. Wolters Kluwer Health/Lippincott Williams & Wilkins, 6th edition, 2013

Course/module:
Elective course - Fundamentals of virology

Fields of education:

Course status: facultative
Course group: B - przedmioty kierunkowe

ECTS code:
Field of study: Medicine
Specialty area: Medicine
Educational profile: General academic
Form of study: full-time
Level of study: uniform master's studies
Year/semester: 3 / 5

Type of course:

Classes
Number of hours per semester/week: Classes: 20

Teaching forms and methods
Classes(K1, U1, W1) : Classes(C.W11,12, 13, 14, 18, 19, D.W15, 18, 19, E.W23, 32, G.W3). Multimedia presentations followed by discussions (D.W15, E.W32)

Form and terms of the verification results:

CLASSES: Part in the discussion - Participation in the classes and discussions during the classes accounts for 25% of the final grade.(K1, U1, W1) ; CLASSES: Presentation - Students prepare short presentations, based on the list of topics given by the lecturer. The evaluation of the presentation and discussion after the presentation constitutes 75% of the final grade.(K1, U1, W1)

Number of ECTS points: 0,5
Language of instruction: English

Introductory courses:
Molecular Biology and Genetics

Preliminary requirements:
basic knowledge of molecular biology, biochemistry and genetics

Name of the organizational unit offering the course:

null,
Person in charge of the course:
dr Magdalena Weidner-Glunde,

Course coordinators:

Notes:

Detailed description of the awarded ECTS points - part B

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The awarded number of ECTS points is composed of:

1. Contact hours with the academic teacher:

- participation in: classes	20 h.
- consultation	2 h.
	22 h.

2. Student's independent work:

- student will search literature about topic assigned by the lecturer and prepare multimedia presentation based on the researched information.	3 h.
	3 h.

1 ECTS point = 25-30 h of the average student's work, number of ECTS points = 25 h : 25 h/ECTS = 1,00 ECTS
on average: **0,5 ECTS**

- including the number of ECTS points for contact hours with direct participation of the academic teacher:	0,88 ECTS points,
- including the number of ECTS points for hours completed in the form of the student's independent work:	-0,38 ECTS points,