



Vaccinology in Practice

Wakcynologia Praktyczna

1. IMPRINT

Academic Year	2026/2027
Department	Faculty of Medicine
Field of study	Medicine
Main scientific discipline	Medical sciences
Study Profile	General academic
Level of studies	Uniform MSc
Form of studies	Full time studies
Type of module / course	Obligatory (elective course)
Form of verification of learning outcomes	Completion
Educational Unit / Educational Units	Department of Social Medicine and Public Health Medical University of Warsaw Medical Simulation Center Banacha Campus 3a Pawińskiego St., 02-106 Warsaw E-mail: msizp@wum.edu.pl
Head of Educational Unit / Heads of Educational Units	Prof. Aneta Nitsch-Osuch, MD
Course coordinator	Katarzyna Lewtak, MD, PhD Katarzyna.lewtak@wum.edu.pl
Person responsible for syllabus	Katarzyna Lewtak, MD, PhD Katarzyna.lewtak@wum.edu.pl
Teachers	Prof. Aneta Nitsch-Osuch, MD Katarzyna Lewtak, MD, PhD

2. BASIC INFORMATION

Year and semester of studies	I-III year, summer, and winter semester	Number of ECTS credits	2.00
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FORMS OF CLASSES	Number of hours	ECTS credits calculation
Contacting hours with academic teacher		
Lecture (L)		
Seminar (S)	30 (e-learning)	1.2
Classes (C)		
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
Unassisted student's work		
Preparation for classes and completions	20	0.8

1. COURSE OBJECTIVES

O1	Understanding the types and technology platforms of vaccines.
O2	Understanding the concept of life long approach to immunization.
O3	Comprehensive understanding of vaccine hesitancy problem.
O4	Having knowledge about the most common indications and contraindications for vaccines, including risk group patients.
O5	Having knowledge about recommended vaccines for pregnant women (maternal immunization rules and principles).
O6	Ability to provide a medical advice for patients who require vaccinations.

2. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING

Code and number of the effect of learning in accordance with standards of learning	Effects in the field of: <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023)</i>
Knowledge – Graduate* knows and understands:	
C.W11	the epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution;
C.W12	the pathogenesis and pathophysiology of infections and contagions and the impact of pathogens such as viruses, bacteria, fungi, prions and parasites on the human body and population, including their modes of action, the consequences of exposure to them and the principles of prevention;
E.W2	principles for the prevention of childhood diseases, including screening, balance testing and immunisation;

E.W3	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic management of the most common childhood diseases and their complications: (9) the most common childhood infectious diseases;
E.W32	principles for dealing with suspicion and detection of an infectious disease;
E.W33	environmental and epidemiological conditions, causes, symptoms, principles of diagnosis and therapeutic and preventive management of the most common infectious diseases and their complications: (1) bacterial diseases, including streptococcal, staphylococcal, pneumococcal and meningococcal infections, whooping cough, tuberculosis, Lyme disease and gastrointestinal infections; (2) viral diseases, including respiratory and gastrointestinal infections, viral hepatitis, Herpesviridae, human immunodeficiency virus and neurotropic virus infections; (3) parasitic diseases, including giardiasis, amebiasis, toxoplasmosis, malaria, toxocariasis, trichomoniasis, roundworm, tapeworm and pinworm; (5) hospital-acquired infections;
G.W3	epidemiology of infectious diseases, including those related to health care, and non-infectious diseases, types and methods of prevention at various stages of the natural history of the disease, and the role and principles of epidemiological surveillance;

Skills– Graduate* is able to:

E.U9	recognize the most common symptoms of the disease in adults, use diagnostic tests and interpret their results, perform differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation;
E.U10	recognize the most common symptoms of the disease in children, apply diagnostic tests and interpret their results, conduct differential diagnosis, implement therapy, monitor the effects of treatment and assess indications for specialist consultation;
E.U13	qualify the patient for vaccinations;
E.U21	provide health education to the patient, including nutritional education tailored to individual needs;
G.U2	collect information on the conditions and presence of risk factors for infectious and noncommunicable diseases and plan preventive activities at various levels of prevention;
G.U4	assess the epidemiological situation of infectious and non-communicable diseases in the Republic of Poland and in the world;

* In appendix to the Regulation of Minister of Science and Higher education from 29th of September 2023 „graduate”, not student is mentioned.

3. ADDITIONAL EFFECTS OF LEARNING *(non-compulsory)*

Number of effect of learning	Effects in the fields of:
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Knowledge – Graduate knows and understands:

K1	Types of vaccinations and technology platforms.
K2	Vaccine hesitancy problem.
K3	Vaccine recommendations and requirements.

Skills– Graduate is able to:

S1	Help patient to choose vaccine, including risk group patients and pregnant women;
S2	Describe and recognise a patient with a hesitant attitude to vaccines;

S3	Plan a vaccination schedule for a patient.
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Social Competencies – Graduate is ready for:

SC1	Being familiar with current vaccine recommendations.
SC2	Identifying the indications and contraindications for vaccines.
SC3	Accessing reliable evidence-based country specific information about vaccine / current epidemiological situation.
SC4	Delivering correct advice using reliable information resources tailored to the individual needs of each patient (regarding vaccines and vaccination schedule).

4. CLASSES

Form of class	Class contents	Effects of Learning
(e-L) seminar 1 asynchronous online course	Introduction to vaccinology. Types of vaccines and technological platforms for vaccine production.	E.W2, E.W3, E.W32, E.W33, G.W3, E.U9, E.U10, E.U21, G.U2, G.U4
(e-L) seminar 2 and 3 asynchronous online course	Lifelong approach to vaccination	C.W11, C.W12, E.W32, E.W33, G.W3, E.U9, E.U10, G.U2
(e-L) seminar 4 asynchronous online course	Maternal immunization – general rules and principles	E.W2, E.W3, E.W32, E.W33, G.W3, E.U9, E.U10, E.U13, E.U21, G.U4
(e-L) seminar 5 and 6 asynchronous online course	Adult immunization	C.W11, C.W12, E.W33, G.W3, E.U9, E.U10, E.U13, E.U21, G.U4
(e-L) seminar 7 asynchronous online course	Vaccine hesitancy	C.W11, C.W12, E.W2, E.W3, E.W32, E.W33, G.W3, E.U9, E.U10, E.U13, E.U21, G.U2
(e-L) seminar 8 and 9 asynchronous online course	Adult immunization – practical aspects	E.W2, E.W3, E.W32, E.W33, G.W3, E.U9, E.U10, E.U13, E.U21, G.U2
(e-L) seminar 10 asynchronous online course	History of vaccines and vaccinology	E.W2, E.W3, E.W32, E.W33, G.W3, E.U9, E.U10, E.U13, E.U21, G.U2

5. LITERATURE

Obligatory

1. Plotkin S, Orenstein W, Offit P, Edwards K: Plotkin's vaccines. 8th edition. Elsevier 2022.

Supplementary

6. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
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C.W11, C.W12, E.W2, E.W3, E.W32, E.W33, G.W3, E.U9, E.U10, E.U13, E.U21, G.U2, G.U4	1. Quizzes, written assignments 2. Test (MCQ) – 30 questions	A minimum score of 70% is required for all quizzes, assignments, and the final test.
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7. ADDITIONAL INFORMATION

Additional Information:

- The maximum number of participants per course edition is 500.
- Students have three attempts to obtain credit for the course (in accordance with §§ 26, 27, and 28 of the Study Regulations).
- The course is conducted entirely online via the e-learning platform www.e-learning.wum.edu.pl.

Course Requirements:

- All course deadlines, including those for assignment submission and completion of required learning activities (reviewing course materials and completing quizzes), will be announced in the General Information section on the main page of the e-learning course. Students are responsible for checking this section regularly and meeting all published deadlines.
- Students are required to study all learning materials provided within the course modules on the e-learning platform.
- After each module, students must complete all required quizzes and assignments. Completion of these activities is mandatory for successful course completion.
- All written assignments must be submitted via the e-learning platform and receive a passing evaluation from the course instructor.
- Students must complete all mandatory course requirements, including studying all course materials, successfully completing all required quizzes, and receiving a passing evaluation for all written assignments.
- Eligibility to take the final test is conditional upon the successful completion and positive assessment of all required written assignments.
- The course is considered successfully completed only after the student has fulfilled all mandatory course requirements and passed the final test available on the e-learning platform.
- A course completion certificate may be downloaded only after the final test has been passed and all required assignments have received a passing evaluation. However, a downloaded certificate does not constitute proof of successful course completion unless all course requirements have been fulfilled, including studying all required learning materials, obtaining passing scores on all required quizzes, and receiving passing evaluations for all required written assignments. Only students who meet all course requirements will be awarded course credit and have the course recorded in the official academic grading system.

Guidelines for the use of Artificial Intelligence (AI) tools

- Within the course, the use of artificial intelligence-based tools is permitted as a means of supporting the learning process.
- AI tools may be used as supportive resources, including for searching and organizing information, analyzing problems, generating a range of possible solutions, and supporting the process of creating and editing texts, while maintaining principles of academic integrity and the Evidence-Based Medicine approach.
- The use of AI tools requires compliance with academic integrity principles, in particular: declaring the use of AI tools in submitted work, maintaining independence in conducting analyses, interpreting results, and formulating conclusions, as well as respecting data protection, information confidentiality, and copyright regulations.
- It is not permitted to: present AI-generated content as one's own original work, use AI-generated responses uncritically as scientific sources of knowledge, or replace the process of reasoning and scientific evaluation with results generated by AI tools.
- The use of AI tools should support the development of analytical and critical thinking skills, as well as decision-making abilities in complex situations, including clinical and healthcare system contexts, rather than replace these skills.

Important Communication Note:

Students are required to regularly check their official MUW email account, as all course-related information is communicated exclusively through the MUW email system.

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ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers

