



## Vaccinology in Practice

### 1. IMPRINT

<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<b>Main scientific discipline</b>	Medical sciences
<b>Study Profile</b>	General academic
<b>Level of studies</b>	Uniform MSc
<b>Form of studies</b>	Full time studies
<b>Type of module / course</b>	Non-compulsory
<b>Form of verification of learning outcomes</b>	Completion
<b>Educational Unit / Educational Units</b>	Department of Social Medicine and Public Health Medical University of Warsaw Medical Simulation Center Banach Campus 3a Pawińskiego St., 02-106 Warsaw E-mail: <a href="mailto:zmsizp@wum.edu.pl">zmsizp@wum.edu.pl</a>
<b>Head of Educational Unit / Heads of Educational Units</b>	Prof. Aneta Nitsch-Osuch, MD, PhD
<b>Course coordinator</b>	Katarzyna Lewtak, MD, PhD e-mail: <a href="mailto:katarzyna.lewtak@wum.edu.pl">katarzyna.lewtak@wum.edu.pl</a>
<b>Person responsible for syllabus</b>	Katarzyna Lewtak, MD, PhD e-mail: <a href="mailto:katarzyna.lewtak@wum.edu.pl">katarzyna.lewtak@wum.edu.pl</a>
<b>Teachers</b>	Prof. Aneta Nitsch-Osuch, MD, PhD Katarzyna Lewtak, MD, PhD

### 2. BASIC INFORMATION

<b>Year and semester of studies</b>	I-VI year, winter and summer semester	<b>Number of ECTS credits</b>	2.00
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FORMS OF CLASSES	Number of hours	ECTS credits calculation
<b>Contacting hours with academic teacher</b>		
Lecture (L)		
Seminar (S)	30 (e-learning)	1.0
Classes (C)		
e-learning (e-L)		
Practical classes (PC)		
Work placement (WP)		
<b>Unassisted student's work</b>		
Preparation for classes and completions	30	1.0

### 3. 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.

### 4. 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 26th of July 2019)</i>
<b>Knowledge – Graduate* knows and understands:</b>	
C.K11	the epidemiology of viral, bacterial, fungal and prion infections and parasitic infections, including their geographical distribution;
C.K12	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.K2	principles for the prevention of childhood diseases, including screening, balance testing and immunisation;

E.K3	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.K32	principles for dealing with suspicion and detection of an infectious disease;
E.K33	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, toxocarasis, trichomoniasis, roundworm, tapeworm and pinworm; (5) hospital-acquired infections;
G.K3	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.S9	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.S10	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.S13	qualify the patient for vaccinations;
E.S21	provide health education to the patient, including nutritional education tailored to individual needs;
G.S2	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.S4	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 26th of July 2019 „graduate”, not student is mentioned.

## 5. 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).

## 6. 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.K2, E.K3, E.K32, E.K33, G.K3, E.S9, E.S10, E.S21, G.S2, G.S4
(e-L) seminar 2 and 3 asynchronous online course	Lifelong approach to vaccination	C.K11, C.K12, E.K32, E.K33, G.K3, E.S9, E.S10, G.S2
(e-L) seminar 4 asynchronous online course	Maternal immunization – general rules and principles	E.K2, E.K3, E.K32, E.K33, G.K3, E.S9, E.S10, E.S13, E.S21, G.S4
(e-L) seminar 5 and 6 asynchronous online course	Adult immunization	C.K11, C.K12, E.K33, G.K3, E.S9, E.S10, E.S13, E.S21, G.S4
(e-L) seminar 7 asynchronous online course	Vaccine hesitancy	C.K11, C.K12, E.K2, E.K3, E.K32, E.K33, G.K3, E.S9, E.S10, E.S13, E.S21, G.S2
(e-L) seminar 8 and 9 asynchronous online course	Adult immunization – practical aspects	E.K2, E.K3, E.K32, E.K33, G.K3, E.S9, E.S10, E.S13, E.S21, G.S2
(e-L) seminar 10 asynchronous online course	History of vaccines and vaccinology	E.K2, E.K3, E.K32, E.K33, G.K3, E.S9, E.S10, E.S13, E.S21, G.S2

## 7. LITERATURE

### Obligatory

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

### Supplementary

## 8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
C.K11, C.K12, E.K2, E.K3, E.K32, E.K33, G.K3, E.S9, E.S10,	1. Quizzes, written assignments 2. Test (MCQ) – 30 questions	1. credit 2. Requirements for a pass: minimum 20 points at the final test

E.S13, E.S21, G.S2, G.S4		
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## 9. ADDITIONAL INFORMATION

The course is available on the platform [www.e-learning.wum.edu.pl](http://www.e-learning.wum.edu.pl).

Student must learn all materials uploaded to the modules on the platform. After each module there are questions (quizzes) or task related to its subject.

Student must send written assignments (tasks) to the teacher (using e-learning platform) and receive a positive evaluation. Student must sent them before proceeding to the final test.

Student must pass the final test (available on the e-learning platform) to obtain a credit.

Printing the certificate is possible only if the student has fulfilled both criteria: passed the final test and a received positive evaluation of tasks.

Students are obligatory to check MUW student email account as all information are sent only by formal MUW mails.

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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