UNIWERSYTET MEDYCZNY
IM. PIASTÓW ŚLĄSKICH WE WROCŁAWIU

Appendix No.3
to Resolution No. 2303
of Senate of Wroclaw Medical University
of 28 April 2021

Syllabus for academic year: 2021/2022 Training cycle: 2021/2022-2026/2027			
Description of the course			
Course	MOLECULAR BASIS OF PARASITOLOGICAL DIAGNOSTICS	Group of detailed education results Group code B C E	Group name Scientific basics of medicine Preclinical sciences Non-interventional clinical sciences
Faculty	Faculty of Medicine		
Major	medicine		
Level of studies	X uniform magister studies ☐ 1st degree studies ☐ 2nd degree studies ☐ 3rd degree studies ☐ postgraduate studies		
Form of studies	X full-time ☐ part-time		
Year of studies	1st	Semester:	☐ winter X summer
Type of course	☐ obligatory ☐ limited choice X free choice / optional		
Language of study	☐ Polish X English		

Number of hours

Form of education

	Lectures (L)	Seminars (SE)	Auditorium classes (AC)	Major Classes – not clinical (MC)	Clinical Classes (CC)	Laboratory Classes (LC)	Classes in Simulated Conditions (CSC)	Practical Classes with Patient (PCP)	Foreign language Course (FLC)	Physical Education (PE)	Vocational Practice (VP)	Directed Self-Study (DSS)	E-learning (EL)
Winter semester:													
..... (Dep. in charge of the course)													
Direct (contact) education[1]													
Distance learning[2]													
Summer semester: 30													
Department of Biology and Medical Parasitology (Dep. in charge of the course)													

[1] Education conducted with direct participation of university teachers or other academics
[2] Education with applied methods and techniques for distance learning

Direct (contact) education						30							
Distance learning													
TOTAL per year: 30													
Department of Biology and Medical Parasitology (Dep. in charge of the course)													
Direct (contact) education						30							
Distance learning													

Educational objectives (max. 6 items)

C1. Independent planning of diagnostic procedures in case of parasitic infection.

C2. Independent preparation of samples for molecular diagnostics (DNA isolation).

C3. PCR designing and conducting.

C4. Analysis of achieved results.

C5. Knowledge of the principles of parasitic infections prophylaxis.

C6. Development social competences needed to practice the medical profession, in accordance with graduate's profile.

Education result for course in relation to verification methods of the intended education result and the type of class:

Number of detailed education result	Student who completes the course knows/is able to	Methods of verification of intended education results	Form of didactic class **enter the abbreviation*
C.W.13	knows the epidemiology of viral and bacterial infections, as well as fungal and parasitic infections, taking into account their geographical distribution	oral answer	LC
C.W.16	knows the invasive forms or stages of development of selected parasitic fungi, protozoa, helminths and arthropods in humans, taking into account their geographical distribution	oral answer	LC
C.W.17	discusses the functioning of the parasite-host system and the main symptoms of disease caused by parasites	oral answer	LC
C.W.19	knows and understands the basics of microbiological and parasitological diagnostics	oral answer	LC
E.W.39	knows the types of biological materials used in laboratory diagnosis and the principles for collecting material for tests	oral answer	LC
E.W.40	knows the theoretical and practical background of laboratory diagnostics	oral answer	LC
B.U.8	uses basic laboratory techniques such as qualitative analysis, titration, colorimetry, pH monitoring, chromatography, electrophoresis of proteins and nucleic acids	performs experiment, report	LC
B.U.10	uses databases, including online databases, and search for required information using the available tools	report	LC
B.U.13	plans and carries out simple scientific research, interpret the results and draw conclusions from them	performs experiment, report	LC

C.U.9	makes preparations and recognize pathogens under the microscope	oral answer, preparing of specimens,	LC

* L- lecture; SE- seminar; AC- auditorium classes; MC- major classes (non-clinical); CC- clinical classes; LC- laboratory classes; CSC- classes in simulated conditions; PCP- practical classes with patient; FLC- foreign language course; PE- physical education; VP- vocational practice; DSS- directed self-study; EL- E-learning

Student's amount of work (balance of ECTS points):

Student's workload (class participation, activity, preparation, etc.)	Student Workload
1. Number of hours of direct contact:	30
2. Number of hours of distance learning:	-
3. Number of hours of student's own work:	9
4. Number of hours of directed self-study	n/a
Total student's workload	39
ECTS points for course	1.5

Content of classes: (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)

Lectures

Seminars

Classes (10 x 3 h)

Class 1. Organization of classes. Health and safety rules. Internal regulations. Theoretical introduction to classes, principles of collecting, transporting and storing of biological material for molecular research;

Class 2. DNA isolation – theoretical introduction and principle of the method;

Class 3. DNA isolation - performing of DNA isolation, part I;

Class 4. DNA isolation - performing of DNA isolation, part II;

Class 5. PCR method - theoretical introduction and principle of the method;

Class 6. PCR - performing of PCR;

Class 7. PCR - performing of PCR (nested-PCR);

Class 8. Electrophoresis - theoretical basics and performing, visualization and interpretation of results;

Class 9. Methods of primers designing - theoretical basics and performing;

Class 10. Analysis of examples of cases of parasitic infections, proposing of diagnostic procedures;

Other

Basic literature (list according to importance, no more than 3 items)

1. **Bogitsh BJ, Cheng TC, Oeltmann T.:** Human parasitology. 4th edition, Academic Press, Elsevier, 2013

Additional literature and other materials (no more than 3 items)

Preliminary conditions: (minimum requirements to be met by the student before starting the course)

Knowledge in the field of parasitology, molecular basis of genetics gained in the first year of studies under the subject "molecular biology".

Conditions to receive credit for the course: (specify the form and conditions of receiving credit for classes included in the course, admission terms to final theoretical or practical examination, its form and requirements to be met by the student to pass it and criteria for specific grades)

Attention! Attendance cannot be a condition for passing the course

The condition of passing the classes is the presence at the classes, independent design and conduct of diagnostic procedures in case of suspected parasitic infection (molecular and microscopic methods); correct interpretation of the results; conduct interview with patients and propose prophylaxis of parasitic infections; Credits and exams take place in direct contact with an academic teacher or using electronic means of communication.

Grade:	Criteria for courses ending with a grade[3]
Very Good (5.0)	presence on classes, independent design and conduct of diagnostic procedures, performing of DNA isolation, nested-PCR, electrophoresis, independent interpretation of the results; conduct interview with patients and propose prophylaxis of parasitic infections;
Good Above (4.5)	presence on classes, independent design and conduct of diagnostic procedures, performing of DNA isolation, nested-PCR, electrophoresis, independent interpretation of the results;
Good (4.0)	presence on classes, independent performing of DNA isolation, nested-PCR, electrophoresis, independent interpretation of the results;
Satisfactory Plus (3.5)	presence on classes, independent performing of DNA isolation, nested-PCR, electrophoresis and independent interpretation of the results;
Satisfactory (3.0)	presence on classes; independent performing of DNA isolation, performing electrophoresis with teacher's help
	Criteria for courses ending with a credit[3]
Credit	

Grade:	Criteria for exam[3]
Very Good (5.0)	
Good Above (4.5)	
Good (4.0)	
Satisfactory Plus (3.5)	
Satisfactory (3.0)	

Department in charge of the course:	Department of Biology and Medical Parasitology
Department address:	Mikulicza-Radeckiego 9, 50-345 Wrocław
Telephone:	71 784 15 12 (secretariat)
E-Mail:	malgorzata.pekalska-cisek@umed.wroc.pl

Person in charge for the course:	Dr hab. Marta Kicia
Telephone:	71 784 15 22
E-Mail:	marta.kicia@umed.wroc.pl

List of persons conducting specific classes:

Name and surname	Degree/scientific or professional title	Discipline	Performed profession	Form of classes
Marta Kicia	dr hab., prof. UM	medical sciences	academic teacher	LC
Magdalena Szydłowicz	dr	medical sciences	academic teacher	LC
Przemysław Leszczyński	mgr	medical sciences	academic teacher	LC

Date of Syllabus development

Syllabus developed by

[3] The verification must cover all education results, which are realize in all form of classes within the course

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29.06.2021

Dorota Tichaczek-Goska

Signature of Head(s) of teaching unit(s)

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Dean's signature

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Wroclaw Medical University
Vice-Dean
prof. Beata