Uniwersytet Medyczny we Wrocławiu
Wydział Lekarski
KATEDRA I ZAKŁAD BIOLOGII I PARAZYTOLOGII LEKARSKIEJ
ul. Mikulicza-Radeckiego 9, 50-367 Wrocław
tel 71 784 15 11 (12), faks 71 784 01 07

UNIWERSYTET MEDYCZNY IM. PIASTÓW ŚLĄSKICH WE WROCŁAWIU

Appendix 5
to Resolution No. 15630
of Senate of Wroclaw Medical University
of 30 March 2016

Syllabus 2018/2019

Description of the course

Module/Course	MOLECULAR BASIS OF PARASITOLOGICAL DIAGNOSTICS	Group of detailed education results	
		Group code	Group name
		A	Morphological sciences
		B	The scientific basis of medicine
		C	Preclinical sciences
		E	Clinical non-surgical sciences
Faculty	Medicine		
Major	medicine		
Specialties	Not applicable		
Level of studies	Uniform magister studies X * 1st degree studies ☐ 2nd degree studies ☐ 3rd degree studies ☐ postgraduate studies ☐		
Form of studies	X full-time X part-time		
Year of studies	Second (II)	Semester	☐ Winter X Summer
Type of course	☐ obligatory ☐ limited choice X free choice / elective		
Course	☐ major X basic		
Language of instruction	☐ Polish X English ☐ other		

* mark ☐ with an X

Number of hours

Form of education

Unit teaching the course	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)	Specialist Classes – magister studies (SCM)	Foreign language Course (FLC)	Physical Education obligatory (PE)	Vocational Practice (VP)	Self-Study (Student's own work)	E-learning (EL)
Winter Semester														
	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Summer Semester														
Department of Biology and Medical Parasitology	-	-	-	-	-	30	-	-	-	-	-	-	9	-
TOTAL per year: 39														

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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. Independent preparing of microscopic slides.
C6. Knowledge of the principles of parasitic infections prophylaxis.

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

Number of course education result	Number of major education result	Student who completes the module/course knows/is able to	Methods of verification of intended education results (forming and summarising)	Form of didactic class ***enter the abbreviation*
W 01	C.W.13	- student knows the epidemiology of parasitic infections taking into account their geographical extent; presents basic principles of prophylaxis of parasitic infections;	oral answer	CN
W 02	C.W.15	- student knows forms infective for humans or developmental stages of chosen protists and helmints taking into account their geographical extent;	oral answer	CN
W 03	C.W.16	- student discusses the principles of functioning of the parasite-host system and knows the basic symptoms of disease caused by human parasites;	oral answer	CN
W 04	C.W.18	- student knows and understands the basics of microbiological and parasitological diagnosis;	oral answer	CN
W 05	E.W.37	- student knows the types of biological materials used in laboratory diagnostics and the principles of collecting materials for testing	oral answer	CN
W 06	E.W.38	- student knows the theoretical and practical basis of laboratory diagnostics;	oral answer	CN
U 01	A.U.1	- student uses an optical microscope, with immersion;	oral answer	CN
U 02	B.U.9	- student uses basic laboratory techniques such as protein and nucleic acid electrophoresis;	performs experiment, report	CN
U 03	B.U.11	- student uses internet databases	report	CN

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		and knows how to find needed information by using available tools;		
U 04	B.U.14	- student plans and performs simple tasks, interprets results and draws conclusions (performs DNA isolation, PCR and analyses results)	performs experiment, report	CN
U 05	C.U.7	- student recognizes the most common human parasites based on their morphology, life cycles and disease symptoms	microscopy; oral answer	CN
U 06	C.U.9	- student plans and designs diagnostic procedures while suspected parasitic infections; - student prepars microscopic slides;	oral answer, prepraring of specimens, report	CN

** L - lecture; SE - seminar; AC – auditorium classes; MC – major classes (non-clinical); CC – clinical classes; LC – laboratory classes; SCM – specialist classes (magister studies); CSC – classes in simulated conditions; FLC – foreign language course; PCP practical classes with patient; PE – physical education (obligatory); VP – vocational practice; SS – self-study, EL – E-learning .

Please mark on scale 1-5 how the above effects place your classes in the following categories:
communication of knowledge, skills or forming attitudes:
Knowledge: 5
Skills: 5

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

Student's workload (class participation, activity, preparation, etc.)	**Student Workload (h)**
1. Contact hours:	30
2. Student's own work (self-study):	9
Total student's workload	39
ECTS points for module/course	1.5
Comments	

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

Practical classes

Principles for the diagnosis of parasitic infections.

- In which cases parasite infection should be considered;
- correct patient interview;

Basis of molecular diagnostics.

- Knowing basic types of molecular diagnostic methods;
- Principles of biological material management for molecular parasitological diagnosis;
- Planning of diagnostic procedures in case of suspected parasitic infection;
- Methodology of DNA isolation;
- PCR design;

Appendix 5
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Use of molecular diagnostic methods in the diagnosis of parasitic infections.

- DNA isolation from various materials (stool, urine, blood, CFS, sputum, biopsy);
- PCR;

Use of molecular diagnostic methods in the diagnosis of parasitic infections, continued.

- Electrophoresis of obtained amplification products;
- Visualization and interpretation of results;

Application of microscopy in the diagnosis of parasitic infections.

- Dagnostic methods: direct (fresh stool examination – fresh preparations in saline or tinted with Lugol or malachite green; decantation and flotation) and indirect (stained smears, immunological, flouorescent, molecular methods); types of preservatives;
- Interpretation of laboratory tests results;

Prophylaxis of parasitic infections.

The most important principles of parasitic infections prophylaxis;

Other ----

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

1. Bogitsh BJ, Cheng TC, Human parasitology, Academic Press, 1998 (2nd edition)

Didactic resources requirements (e.g. laboratory, multimedia projector, other...)

Laboratory equipped with microscopes, thermal cyclers, small laboratory equipment, reagents for DNA isolation and PCR. Room equipped with multimedia.

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

Knowledge in the field of parasitology, microscopy, 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 module/course, admission terms to final theoretical or practical examination, its form and requirements to be med by the student to pass it and criteria for specific grades)

Passing without assessment - presence on exercises; 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;

Grade:	Criteria (only for courses/modules ending with an examination)
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 Plus (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, performing of DNA isolation, nested-PCR, electrophoresis, independent interpretation of the results;
Satisfactory Plus (3.5)	presence on classes, performing of DNA isolation, nested-PCR, electrophoresis and independent interpretation of the results;
Satisfactory (3.0)	presence on classes;

Name and address of module/course teaching unit, contact: telephone and e-mail address

Department of Medical Biology and Parasitology, ul. J. Mikulicza-Radeckiego 9, Wrocław,
tel. 71 784 15 12 (secretariat)
e-mail: malgorzata.pekalska-cisek@umed.wroc.pl

Coordinator / Person responsible for module/course, contact: telephone and e-mail address

Dr Marta Kicia
tel. 71 784 15 22
e-mail: marta.kicia@umed.wroc.pl

List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes.

SEMINARS and CLASSES:

Marta Kicia. dr, medical biology, biotechnology
Przemysław Leszczyński, mgr, medical biology, biotechnology

Date of Syllabus development	Syllabus developed by
26.06.2018	Dr Marta Kicia/Dr Dorota Tichaczek-Goska

Signature of Head of teaching unit

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Signature of Faculty Dean

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