



Syllabus 2019/2020														
Description of the course														
Module/Course	Techniques in Molecular Medicine – optional course						Group of detailed education results							
							Group code	Group name						
						B	Scientific Basics of Medicine							
						C	Pre-clinical sciences							
Faculty	Medicine													
Major	Medicine													
Specialties	Not applicable													
Level of studies	Uniform magister studies X * 1 <sup>st</sup> degree studies <input type="checkbox"/> 2 <sup>nd</sup> degree studies <input type="checkbox"/> 3 <sup>rd</sup> degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	X full-time <input type="checkbox"/> part-time													
Year of studies	I					Semester		<input type="checkbox"/> Winter X Summer						
Type of course	<input type="checkbox"/> obligatory <input type="checkbox"/> limited choice X free choice / elective													
Course	<input type="checkbox"/> major X basic													
Language of instruction	<input type="checkbox"/> Polish X English <input type="checkbox"/> other													
* mark <input type="checkbox"/> 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														
Molecular Techniques Unit						20							6	
TOTAL per year:														





1. Contact hours:	20
2. Student's own work (self-study):	6
Total student's workload	26
ECTS points for module/course	1
Comments	
<b>Content of classes</b> (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)	
<b>Lectures</b>	
1.	
2.	
3.	
<b>Seminars</b>	
1.	
2.	
3.	
<b>Practical classes</b>	
Class I: Taking a blood sample. Separation of lymphocytes from whole blood by Gradisol gradient. Collection and storage of isolated cells. Preparing of stains from saliva on the tissue papers.	
Class II: Isolation of DNA from lymphocytes using phenol-based method. DNA extraction from bloodstain using a Chelex method.	
Class III: Total RNA isolation on-column method. The reaction of reverse transcription.	
Class IV: PCR and its application in the example of detection of polymorphisms in the <i>CCR5</i> gene.	
Class V: RFLP that is PCR and RESTRICTION ENZYMES: Restriction enzymes in the example of hemochromatosis diagnosis.	
Class VI: ELECTROPHORESIS: Agarose gel electrophoresis of products obtained in during previous exercises. Databases (NCBI, USCS): where to find information about genes, what we can find, searching for the DNA, mRNA sequence.	
Class VII: Introduction into gene therapy.	
<b>Other</b>	
1.	
2.	
3.	
etc. ...	
<b>Basic literature</b> (list according to importance, no more than 3 items)	
1. McLennan, AG, Bates, AD, Turner, PC, White, MRH Instant Notes in Molecular Biology. Published by Springer-Verlag (1997-09-01)	
2. Genomes , T.A. Brown, Garland Science Publishing, 2007	
<b>Additional literature and other materials</b> (no more than 3 items)	
1.	
2.	
3.	
<b>Didactic resources requirements</b> (e.g. laboratory, multimedia projector, other...)	
The laboratory is equipped with a lot of thermocyclers, centrifuges, thermomixer and of course the multimedia projector.	



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

Sign up for the list. Basic knowledge of genetic

Conditions to receive credit for the course:

Each absence must be made up, including rector's days or dean's hours.

To receive credit for the course student is obligated to be present at 100% of classes or any absence must be made up by preparing assay discussing the topic chosen by the student.

The course is ended by a one-choice test. The mark received at the end of the course will be estimated based on a number of positive answers as presented in the table below.

<b>Grade:</b>	<b>Criteria for course</b>
Very Good (5.0)	100%-93%
Good Plus (4.5)	92,9%-85%
Good (4.0)	87,9%-78%
Satisfactory Plus (3.5)	77,9%-70%
Satisfactory (3.0)	69,9%-60%

  

<b>Grade:</b>	<b>Criteria for exam (if applicable)</b>
Very Good (5.0)	
Good Plus (4.5)	
Good (4.0)	
Satisfactory Plus (3.5)	
Satisfactory (3.0)	



Name of unit teaching course:	<b>Molecular Techniques Unit</b>
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E-mail	<b>anna.karpiewska@umed.wroc.pl</b>

Person responsible for course:	<b>Dr Małgorzata Małodobra-Mazur</b>
Phone	<b>71 784-15-95</b>
E-mail	<b>malgorzata.malodobra-mazur@umed.wroc.pl</b>

<i>List of persons conducting specific classes:</i>	<i>degree/scientific or professional title</i>	<i>Discipline</i>	<i>Performer profession</i>	<i>Form of classes</i>
<b>Małgorzata Małodobra-Mazur</b>	Dr	Molecular biology	Medicine laboratory	Laboratory classes

**Date of Syllabus development**

**Syllabus developed by**

02.07.2019

Dr Małgorzata Małodobra-Mazur

**Signature of Head of teaching unit**

Signature of Faculty Dean  
FACULTY OF MEDICINE  
VICE-DEAN FOR STUDIES IN ENGLISH  
Prof. Andrzej Hendrich, PhD

Uniwersytet Medyczny we Wrocławiu  
Katedra Medycyny Sądowej  
ZAKŁAD TECHNIK MOLEKULARNYCH  
kierownik  
prof. dr hab. Tadeusz Dobosz

