



Educational objectives (max. 6 items)

- C1. Mastering the basic techniques of molecular medicine by the student
C2. Orientation in various issues and techniques of molecular medicine
C3. Learning basic techniques of genetic material visualization in agarose gel electrophoresis.

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 summarizing)	Form of didactic class <i>**enter the abbreviation</i>
W01	B.W13.	- knows the function of nucleotides in cell, I- and II- dary structures of DNA and RNA	Essay, discussion	LC
	B.W14.	- knows the function of genome, transcriptome and proteome of human body and basic methods used for its study		
	C.W1.	- knows the basic concepts of genetic		
	C.W9.	- knows the basic methods for genomic mutation diagnosis		
U01	B.U9.	- uses basic laboratory techniques such as: qualitative analysis, nucleic acids electrophoresis	Essay, discussion	LC
	B.U10.	- supports simple measuring instruments and evaluates the accuracy of measurements		
	B.U11.	uses databases, including web databases, and searches for the necessary information using the available tools		
	B.U14.	- plans and performs a simple research and interprets its results and draws conclusions.		

** 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: 4	
Student's amount of work (balance of ECTS points):	
Student's workload (class participation, activity, preparation, etc.)	Student Workload (h)
1. Contact hours:	20
2. Student's own work (self-study):	6
Total student's workload	26
ECTS points for module/course	1
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)	
Lecture	
1. 2. 3.	
Seminar	
1. 2. 3.	
Practical classes	
<p>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.</p> <p>Class II: Isolation of DNA from lymphocytes. DNA extraction from bloodstain using a Chelex method.</p> <p>Class III: Total RNA isolation on-column method. The reaction of reverse transcription.</p> <p>Class IV: PCR and its application in the <i>Treponema denticola</i> detection (from gums smears).</p> <p>Class V: PCR and RESTRICTION ENZYMES: Restriction enzymes in the example of hemochromatosis diagnosis.</p> <p>Class VI: ELECTROPHORESIS: Agarose gel electrophoresis of TD and hemochromatosis PCR products. Seeing minimum of Molecular Techniques Unit.</p> <p>Class VII: Data bases (NCBI, USCS): where to find information about genes, what we can find, searching for the DNA, mRNA sequence.</p>	
Other	
1. 2. 3. etc.	
Basic literature (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)	
1. Genomes 3, T.A. Brown, Garland Science Publishing, 2007	
Didactic resources requirements (e.g. laboratory, multimedia projector, other...)	
Laboratory is equipped with a lot of the : thermocyclers, centrifuges , thermomixers 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 (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 met by the student to pass it and criteria for specific grades)	



To receive credit for the course student is obligated to be present at least 90% of classes and prepare essay discussed the topic chosen by the student.

Grade:	Kryteria oceny: (tylko dla przedmiotów/modułów kończących się egzaminem,)
Very Good (5.0)	
Good Plus (4.5)	
Good (4.0)	
Satisfactory Plus (3.5)	
Satisfactory (3.0)	

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

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

Prof. dr hab. Tadeusz Dobosz, 71 784-15-97, tadeusz.dobosz@umed.wroc.pl

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

Małgorzata Małodobra-Mazur/doktor/molecular biology/lecturer/laboratory classes

Miron Tokarski/master/molecular biology/PhD student/laboratory classes

Date of Syllabus development

29.06.2017

Syllabus developed by

Małgorzata Małodobra-Mazur

Signature of Head of teaching unit

Signature of Faculty Dean

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