



Academic year 2019/2020														
Description of the course														
Module/Course	Proteins and macromolecules										Group of detailed education results			
											Group code B	Group name The scientific basis of medicine		
Faculty	Medicine													
Major	Medicine													
Specialties	Not applicable													
Level of studies	Uniform magister studies X* 1 st degree studies <input type="checkbox"/> 2 nd degree studies <input type="checkbox"/> 3 rd degree studies <input type="checkbox"/> postgraduate studies <input type="checkbox"/>													
Form of studies	X full-time part-time													
Year of studies	1 st			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 (SCIM)	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 Chemistry and Immunochemistry			10											
TOTAL per year:														
Department of Chemistry and Immunochemistry			10											
Educational objectives (max. 6 items)														



C1. Extending knowledge of the structure, properties and functions of proteins				
C2. Extending the knowledge of the function of glycoconjugates in living matter				
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 <i>**enter the abbreviation</i>
W 01		Student knows the bonds and chemical interactions stabilizing the structure of proteins. Student describes the structure of globular, filamentous and membrane proteins. Student knows the function of glycoconjugates.	Individual evaluation of student's progress	AC
U 01		Student describes the structure of proteins. He understands how environmental factors affect the physicochemical properties of the protein.	Individual evaluation of student's progress	AC
<p>** 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 .</p>				
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:			10	
2. Student's own work (self-study):			3	
Total student's workload			13	
ECTS points for module/course			0,5	
Comments				
Content of classes				
Not applicable				
Lectures				
Not applicable				
Seminars				
1. The levels of protein structure. Bonds and chemical interactions stabilizing the protein structure.				
2. Protein architecture. Globular, filamentous and membrane proteins.				
3. How the structure determines the function of proteins.				



4. Solubility and physicochemical properties of proteins. The influence of environmental factors on the physicochemical properties of the protein.	
5. Functions of glycoconjugates in living matter, adhesion of pathogens, reactions in the immune system.	
Practical classes Not applicable	
Other Not applicable	
Basic literature (list according to importance, no more than 3 items) 1. Chemistry. An Introduction to General, Organic and Biological Chemistry. Timberlake KC, Benjamin Cummings, Pearson Education, Inc., 2017 2. Murray RK, Granner DK, Rodwell VW. Illustrated Harper's Biochemistry 3. Harvey R, Ferrier D. Lipincot's Illustrated Reviews: Biochemistry Additional literature and other materials (no more than 3 items) Not applicable	
Didactic resources requirements (e.g. laboratory, multimedia projector, other...) Multimedia equipment and a white/black board.	
Preliminary conditions (minimum requirements to be met by the student before starting the module/course) Not applicable	
Conditions to receive credit for the course: Student is obligated to be present at 100% of classes and each absence must be made up, including rector's days or dean's hours. To receive credit for the course student is obligated to present the chosen topic on the group forum. Positive evaluation of theoretical and practical skills based on the individual student's work at the workshop.	
Grade:	Criteria (only for courses/modules ending with an examination)
Very Good (5.0)	Active participation in the course, preparation of individual above average presentation for the rest of group
Good Plus (4.5)	Active participation in the course, preparation of individual presentation for the rest of a group
Good (4.0)	Active participation in the course, preparation of presentation in a group
Satisfactory Plus (3.5)	Active participation in the course
Satisfactory (3.0)	Participation in the course

Name of unit teaching course:	Department of Chemistry and Immunochemistry
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Person responsible for course:	Dr hab. Mirosława Ferens-Sieczkowska, prof. nadzw.
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List of persons conducting specific classes:	degree/scientific or professional title	Discipline	Performer profession	Form of classes
Mirosława Ferens-Sieczkowska	dr hab., prof. nadzw.	Medical Chemistry	scientist/ academic teacher	auditorium classes

Date of Syllabus development

5.02.2019.

Syllabus developed by

Uniwersytet Medyczny we Wrocławiu
KATEDRA I ZAKŁAD CHEMII I IMMUNOCHEMII
kierownik
.....
dr hab. Mirosława Ferens-Sieczkowska, prof. nadzw.

Signature of Head of teaching unit

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dr hab. Mirosława Ferens-Sieczkowska, prof. nadzw.

Signature of Faculty Dean

Wrocław Medical University
Faculty of Medicine
Vice-Dean for English Studies
.....
prof. Beata Sobieszkańska, PhD