

Discipline's file

1. Data about the program

1.1 Instituția de învățământ superior	UNIVERSITY OF MEDICINE AND PHARMACY "VICTOR BABES" TIMISOARA
1.2 Faculty	FACULTY OF DENTAL MEDICINE – DENTAL MEDICINE
1.3 Department	III
1.4 Field of study ¹⁾	License
1.5 Studies cycle ²⁾	License
1.6 Programme of studies/ Calification	MD

2. Data about discipline

2.1. Discipline's name	Immunology							
2.2 Discipline's lectures holder	Assistant Professor Dr. Zambori Csilla							
2.3 Discipline's laboratory activities holder	Assistant Professor Dr. Gavriliuc Oana Isabela							
2.4 Year of study	II	2.5 Semester	I	2.6 Evaluation type	Colloquy	2.7 Discipline's regime	Content ³⁾	DF
							Obligativity ³⁾	DI

3. Total time estimated (hours for semester of didactic activities)

3.1 Weekly hours	4	3.2 from which : lecture	2	3.3 laboratory	2
3.4 Total hours of the education plan	28	3.5 form which: lecture	14	3.6 laboratory	14
Distribution of time					hours
Manual study, course support, bibliografy and notes					5
Supplementary documentation in library, on on-line speciality platforms and field					10
Preparation of seminars/ laboratories/ projects, homeworks, reports, portofolio and essays					10
Tutoring					
Examinations					1
Other activities					
3.7 Total individual hours	25				
3.8 Total semestre hours	30				
3.9 Number of credits ⁵⁾	1				

4. Preconditions (when there is the case)

4.1 of curriculum	
4.2 of competencies	

5. Conditions (when there is the case)

5.1 for completing the course	<ul style="list-style-type: none"> - Mobile phones are to be switched off during the lectures; phone conversations during the lecture or leaving the amphitheater by the students in order to take personal phone calls are not allowed; - Student tardiness for the lecture is not tolerated as it proves to be disruptive to the educational process;
5.2 for the progress of the seminar/ laboratory activities/ project	<ul style="list-style-type: none"> - Mobile phones are to be switched off during the lectures; phone conversations during the lecture or leaving the amphitheater by the students in order to take personal phone calls are not allowed; - Student tardiness for the lecture is not tolerated as it proves to be disruptive to the educational process;

6. Specific competencies achieved

Professional Competencies	<ol style="list-style-type: none"> 1. Know the terms and definitions of fundamental immunology; 2. Capacity to explain the immune response in specific pathology: autoimmune diseases, cancer, primary and secondary immune deficiencies, hypersensibilities, etc.; 3. Capacity to explain the signs and clinical symptoms, as well as the laboratory values for different parameters in immune diseases; 4. Practical evaluation of laboratory tests: isolation of PBMCs from peripheral blood, flowcytometric immune phenotyping, use of monoclonal antibodies etc.;
Transversal Competencies	<ol style="list-style-type: none"> 1. Preoccupation for professional development through the involvement of critical thinking skills demonstrated by active participation in the lectures and labs. 2. Involvement in scientific research activities by participating in the development of reports and tutoring activities 3. Effective use of information sources and communication resources and assisted professional training (Internet portals, specialized software applications, on-line courses, etc.) both in Romanian and in an international language.

7. Discipline's objectives (from the accumulated specific competencies)

7.1 Discipline's general objective	Learning the fundamental Immunology notions
7.2 Specific objectives	<p>Knowing and understanding the elementary notions of Immunology</p> <p>Critical analysis of different modern Immunology concepts</p> <p>Power point/report presentations</p>

8. Contents

8.1 Lecture	Teaching methods	Hours	Observations
1. General structure of the human immune system. Lymphoid organs.	Interactive lecture	2	Oral lecture performed using interactive, structured PowerPoint presentations accompanied by a rich and suggestive iconography consisting in images, tables, charts and even animations that simulate physiological processes. The material is reviewed and updated with the most recent information.
1. Effector cells and mechanisms of specific and non-specific immune response		2	
2. Antigens		2	
3. Antibodies		2	
4. Major histocompatibility complex		2	
5. B lymphocytes and humoral immune response; T lymphocytes and cell-mediated immune response.		2	
6. Immunopathology notions		2	
7.			
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12.			
13.			
14.28			

Mandatory bibliography:

1. How the Immune System Works, L. Sompayrac, Wiley-Blackwell, 4th edition, 2012.

2.
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Facultative bibliography:
1. Imunologie fundamentala, Virgil Paunescu, Jean-Claude Homberg, Ed Orizonturi Universitare, Timisoara, 1999.
2.
.....

8.2 Seminar/ Laboratory /probation/ project	Methods of teaching - learning	Hours	Observations
1. Mononuclear cells isolation by centrifugation in density gradient	LECTURE+DEBATE+STUDIES – CASE PRESENTATIONS	2	- Demonstrations of the methods used in paraclinical evaluation of immune response (flowcytometry, immunoenzyme assay, hitocompatibility tests) - Presentation of methods of investigation (laboratory tests) and interpreting the results of such tests to investigate the mechanisms contributing to the homeostasis of immune system and to identify the involvement of such results in dentistry practice
2. Flowcytometry		2	
3. Imunoenzyme assay		2	
4. Molecular immunology assays		2	
5. Histocompatibilit y tests		2	
6. Mononuclear cells proliferation targeted by specific mitogens		2	
7. Microlymphotoxi city assay		2	
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14.....28			

Mandatory bibliography:
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Facultative bibliography:
1. Imunologie fundamentala, Virgil Paunescu, Jean-Claude Homberg, Ed Orizonturi Universitare, Timisoara, 1999.
2.
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9. Corroborating the contents of the discipline with the expectations of the representatives of the epistemic communities, professional associations and representative employers in the field related to the program

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10. Evaluation

Activity type	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 % from final grade
10.4 Lecture	<i>Minimal knowledge for mark 5:</i> correct answers in 12 MCQ <i>Knowledge for mark</i>	Colloquy: 30 questions with one correct answer	85%

	10: correct answer in minimum 28 MCQ		
10.5 Laboratory/Probation	<i>Minimal knowledge for mark 5:</i> identification of analysis type; identification of normal limits of parameters <i>Knowledge for mark 10:</i> identification of analysis type; describing of practical procedure; identification of normal limits of parameters; correct interpretation of the results	Practical exam: interpretation of an analysis bulletin	15%
10.6 Minimum standard of performance			
<ul style="list-style-type: none"> Understanding and gaining the basic knowledge of Fundamental Immunology Adequate medical language 			

Date of completion	Signature of lectures holder	Signature of laboratory holder
26/10/2018	1.Assistant Professor Dr. Zambori Csilla	1.Assistant Professor Dr. Gavriiliuc Oana Isabela
Signature of Immunology Discipline Coordinator Prof. Dr. Virgil Paunescu		
Date of Department approval 29/10/2018	Signature of Department Director Prof. Dr. Virgil Paunescu	

Note:

- 1) Field of study – it will be choosed one of the variants: License/ Master/ PhD (**to be completed in accordance with the Nomenclature of Domains and Specializations / Academic Programs in force**);
- 2) Study cycle – *it will be choosed one of the variants*: License/ Master/ PhD;
- 3) Discipline's regime (content) –*it will be choosed one of the variants*: **DF** (Fundamental Discipline)/ **DD** (Domein Discipline)/ **DS** (Speciality Discipline)/ **DC** (Complementary Discipline) - *for license*; **DAP** (Discipline of Deepening)/ **DSI** (Discipline of Synthesis)/ **DCA** (Discipline of Advanced Knowledge) - *for master*;

- 4) Discipline's regime (compulsoriness) –*it will be choosed one of the variants:* **DI** (Mandatory discipline)/ **DO** (Optional Discipline)/ **DFac** (Facultative discipline);
- 5) One credit is equivalent to 25 to 30 hours of study (didactic activities and individual study).
- 6) For the specializations and / or disciplines with the themes found in the bibliography of residents, it becomes mandatory.