



DISCIPLINE FILE IMMUNOLOGY

1. Data about the program

1.1	“CAROL DAVILA” UNIVERSITY OF MEDICINE AND PHARMACY BUCHAREST
1.2	FACULTY OF MEDICINE / DEPT. 1 FUNCTIONAL SCIENCES
1.3	PATHOPHYSIOLOGY
1.4	STUDY FIELD HEALTH
1.5	STUDY LEVEL - MD
1.6	PROGRAMME - MEDICINE

2. Data about the discipline

2.1	DISCIPLINE NAME						
	IMMUNOLOGY						
2.2	COURSE HOLDER.						
2.3	ASSISTANT PROFESSOR						
2.5Year of stud	III	2.6 Semester	V and VI	2.7Evaluation type	Practical examination oral and final examination written	2.8Type of discipline	Fundamental discipline

3. Estimated total time (hours/semester didactic activity)

Hours / week	20	Course .	20	Seminary / laboratory	
Total hours of learning schedule	56	Course	56	Seminary / laboratory	
Distribution of time	28 weeks				
Textbook study, lecture support, bibliography and notes					
Supplementary documentation (in the library, online field)					
Preparing for seminary/lab, homework					
Tutoring					
Examination					
Other activities					
Total hrs. individual study					
Total hrs.per semester					
Credits					3

4.Preconditions (where needed)not required

5. Conditions(when needed) not required

6. Specific accumulated competences

Professional skills (as knowledge and abilities)	The content of the discipline and the working methods with the students ensure the development of the knowledge, understanding and use of diagnostic methods, explanation and interpretation of the results and their integration into clinical practice through specific applications. This gives you an important professional skills: Establishing a diagnosis based on investigations, on stages, and finally on reflection on possible differential diagnosis.
Transversal competences (role, professional and personal development)	Development of preclinical medical thinking and autonomy in how to assess a patient's medical problem, moral and social education for the medical field, personal and professional development. Teamwork abilities, flexibility, adaptability in different circumstances.

7. Discipline objectives (from the specific competences grid)

7.1 General objective	Fundamental Immunology course in Romanian and English are teach during two semesters. The objectives of this discipline are: knowledge of cell and molecular biology of the humoral and cell immune response to normal with reference to the types of cells involved, their phenotypic characteristics, their activation mechanisms, their effector functions; knowledge of the main chapters of immunopathology of major importance for the current medical practice; knowledge of the main immunological investigation methods for establishing a correct functional diagnosis.
7.2 Specific objectives	<p>Correct interpretation of the results of immunological para - clinical investigations.</p> <p>The ability to justifiably indicate current immunological explorations.</p> <p>They will know the indications, contraindications and limits of certain immunological functional explorations.</p> <p>They will logically understand the clinical context in immunopathology.</p>

8. Content

8.1. Cours	Teaching method	Observations
1. Introductory lecture-general aspects of the immune response	Oral presentation in the lecture hall supported by numerous schemes; interactive contact	2 h
2. The organization of the immune system; type of immune responses		2h
3. The antigen; definition, types...		2h
4. Immunoglobulins- structure, functions		2 h
5. Ontogenesis of B lymphocytes		2h

6. Ontogenesis of T lymphocytes	2h
7. Molecular histocompatibility complex MHC I, II	2 h
8. Mechanisms of selective antigen presentation in function of their origin	2 h
9. T lymphocyte receptors —types	2 h
10. B lymphocyte receptors —types	2 h
11. Cellular mediated lysis versus the complement mediated lysis	2 h
12. Humoral immune response: organization and function	2h
13. Complement system	2 h
14. Cellular mediated immune response	2 h
15. Type I hypersensitivity; mechanisms and stages	2 h
16. Allergic diseases	2 h
17. Type II hypersensitivity stages, mechanism, pathology	2 h
18. Type III hypersensitivity stages, mechanism, pathology	2 h
19. Type IV hypersensitivity classification, types, stages, mechanism, pathology	2 h
20. Immune tolerance- mechanisms	2 h
21. Organospecific autoimmune diseases	2 h
22. Diffuse autoimmune diseases	2 h
23. Tumor immune defense	2 h
24. The organ transplantation and mechanisms of acute and chronic rejection	2 h
25. The neuro- immuno modulation principles	2 h
26. The principles of investigation in humoral immunity response - diagnostic value	2 h
27. The principles of investigation in cellular mediated immune response - diagnostic value	2 h
28. The quality management in immune laboratory	2 h

Bibliography

1. Imunologie fundamentala, Constantin Bara, Ed. Medicala, 1996
2. Essential de Imunologie, Constantin Bara, Ed. ALL Medical, 2002, ISBN 973-571-373-X
3. Imunologia transplantului, Ileana Constantinescu, ISBN: 978-973-708-431-6, 2009
4. Basic concepts in immunology, John Clancy, JR, ISBN 0-07-011371-8, 1998
5. Immunology –Problem based, Reginald M Gorczynski, Jacqueline Stanley, 2006
6. How the immune system works, third edition, Lauren Sompayrac, ISBN: 978-1-4051-6221, 2008
7. Oxford Handbook of clinical immunology, Gavin Spickett, ISBN 0-19-262721-x, 1999

8. Immunology, Stephen Boag & Amy Sadler, ISBN 978-0-340-92558-4, 2007
9. Roitt's Essential Immunology, Peter J., Delves I., Seamus J., Martin Dennis R., Burton Ivan M Roitt, 12th edition. 2011
10. Human Leucocyte antigen: The major Histocompatibility Complex of Man, Clinical Diagnosis and management by Laboratory Methods, J. Bernard Henry, M.D. twentieth ed. 2001
11. Genetics and molecular genetics of the MHC, reviews in Immunogenetics, Rhodes, D.A. Trowsdale, J., 1999
12. Molecular Diagnostics- a training and study guide, Tsongalis Gregory J, Coleman William B., 2002

8. Correlation between department activity and expectation of epistemic community members, professional associations and employers in representative fields

Complete course and laboratory of Pathophysiology allows the accumulation of knowledge for promotion in the fourth year of study in the Medicine Faculty and acquiring knowledge for the license, residency and doctorate.

9. Evaluation

Activity type	Evaluation criteria	Methods of evaluation	% out of final grade
Cours	Knowledge of the theoretical notions of immunology	The final exam consists of a control paper from the theory delivered in the lecture is given. Single and multiple choice questionnaire from theoretical items treatable in 1.30 / 2 h	100%
Minimum performance standards			
Minimum grade is five at cours exam			

Data completării:

4.04.2018

Semnătura sefului disciplinei

Prof.Univ.Dr.

Data avizării în Consiliul
Departamentului:

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Semnătura directorului de departament

