




DISCIPLINE SHEET

1.-Info about the program

FOUNDATION FOR DEVELOPMENT AND MANAGEMENT	
1.2-Faculty	FACULTY OF MEDICINE
1.3-Departament	Preclinical/Fundamental Discipline
1.4-Study domain	Health
1.5-Study cycle	Bachelor
1.6-Study program/ Calification	Medicine-English



2.-Info about discipline

2.1- Name of the discipline	IMUNOLOGY							
2.2-Course lecturer	1.- Lect.Dr. HUNEA Iuliana , MD, PhD (Year II) 2.- Lect.Dr. PADUREANU Liliana , MD, PhD (Years (III-V))							
	1.-Lect.Dr. HUNEA Iuliana , MD, PhD (ANUL VI) 2.- Lect.Dr. PADUREANU Liliana , MD, PhD (Years (III-V))							
2.4-Year of study	II	2.5 Semester	II	2.6 Evaluation type	Exam	2.7. Discipline regime	Content	DF
							Mandatory	DOB

3. -Total time (hours of didactic activity per semester)

3.1-Number of hours per week	3	3.2 -course	1	3.3- laboratory	2
3.4-Total hours of the curriculum	42	3.5 -course	14	3.6 -laboratory	28
Distribution of time					Hours
Study after manual, course support, bibliography and notes					20
Additional documentatin in the library, on the specialized electronic platforms and on the field					5
Training seminars/laboratories/projects, themes, papers,portofolios and essays					4
Tutoring					2
Examination					2
Other activities					-
3.7-Individual study hours	33				
3.8-Total hours per semester	75				
3.9-Credit number	3				

4.-Preconditions (if applicable)



4.1.-Curriculum	Physiology
4.2.-Learning Outcomes	-

5.-Conditions (where applicable)

5.1. -Course Conduct	Amphitheatre
5.2.-conducting the seminar/laboratory	The practical exam will be held in the last week, from the subject of the practical works/laboratories/internships previously displayed

6. Learning outcomes

Knowledge	Identifies, describes, explains and classifies the mechanisms of disease production, risk factors, pathogens (bacteria, viruses, parasites) and types of immunological response, as well as the development of pharmacological and genetic approaches.
Skills	Correctly interpret and apply fundamental concepts regarding disease mechanisms and methods for investigating biological functions.
Responsibilities and autonomy	Integrates fundamental notions and methods of investigating biological functions, formulates and assumes reasoned conclusions regarding the general mechanisms of disease production and general principles of treatment.

7.-Objectives of the discipline (resulting from the grid of specific skills accumulated)

7.1 -General objective of the discipline	Theoretical education in the basic mechanisms of the immune system and the development of skills in correlating clinical skills with preclinical knowledge related to the functionality of the immune system
7.2- Specific objectives	1.-Antigenicity and immunogenicity 2.-Description of the components of the immune system 3.-Mechanisms of self/non-self-discrimination 4.-Description of humoral and cellular immune responses



	5.-Description of the molecules of the immunoglobulin superfamily 6.-Hypersensitivities 7. Description of the fundamental concepts of autoimmune processes and immunodeficiencies 8.-Principles of immunological methods
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8.-Contents

8. 1-Course (homework, number of hours, bibliography)	hours / week	Teaching methods
1.-Immunogenicity and antigen structure	1	Active and Interactive Video Projection
2.-Innate immunity – natural barriers, cells and molecules	1	
3.-Antigen receptors -BCR -TCR	1	
4.-Antigen receptor getica	1	
5.-Ontogenesis of B and T lymphocytes	1	
6.-Major Histocompatibility Complex (MHC)	1	
7.-Antigen processing and presentation	1	
8.-Activation of B and T cells	1	
9.-B's mechanisms of action	1	
10.-Mechanisms of action of T cells	1	
11.-Cytokine	1	
12.-Inflammation	1	
13.-Hypersensitivities	1	
14.-Anti-bacterial, anti-viral and anti-parasite immunity	1	
Mandatory bibliography: 1.-Richard Goldsby, Thomas J. Kindt, Barbara Osborne: Kuby's Immunology, 8th Edition, 2017 2.-Janeway's -Immunobiology, 9th edition, 2017. Optional bibliography 1.-Abul K. Abbas, Andrew H. Lichtmann: Cellular and Molecular Immunology, 9th edition 2017 2.-Earl Mindell, Dr. Pamela Wartian Smith; Trad. Cristina Spataru : All About Allergies Classic and Alternative Causes and Treatments, Bucharest : Lifestyle Publishing, 2017		



3.-Grigore Mihaescu, Carmen Chifiriuc - Immunology and Immunopathology. Second edition. Publisher: Medicala,2021
 4.-R Coico- Immunology – A Short Course, VIII Edition, 2021
 5.-Abeer Feteih, Michael Fein, Natacha Tardio- Handbook of Allergy and Clinical Immunology, 2022
 6.-Clinician's Allergy Handbook-PublisherTaylor & Francis Ltd, 2022
http://old.umft.ro/carti-in-format-electronic--medicina-general_a_184
<https://worldscholarshub.com/ro/free-medical-books-pdf>

8. 2- Seminar (themes, number of hours, bibliography	hours /week	Teaching methods
1.-Antigenicity/immunogenicity: implications for the immunisation process	2	Oral presentation - Power Point support
2.-Cross-reactivity: practical applications	2	
3.-Classes and subclasses of immunoglobulins	2	
4.-Blood types. ABO and Rh.	2	
5.-T-dependent and T-independent antigens.	2	
6.-Classes of antibodies Ag-Ab interaction in the agglutination reaction; Ag-Ab interaction in precipitation reaction	2	
7.-Hybridoma, monoclonal antibodies	2	
8.-Solid phase tests: RIA, RIST, RAST, ELISA	2	
9.-Immunohistochemistry,	2	
10.-Immunofluorescence	2	
11.-Western blot,	2	
12.-Southern blot	2	
13.-Flow cytometry	2	
14.-Cellular Functionality Tests Immunological Investigations in Immune Pathology	2	

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9.-Corroborating/validating the contents of the discipline with the expectations of the representatives of the epistemic community, professional associations and employers representative of the field related to the program

The contents of the discipline are in accordance with the RNCIS standards.

10.-Evaluation

Activity Type	10.1 -Evaluation criteria	10.2-Evaluation methods	10.3-Weight of the final grade
10.4-Course	Grade for the multiple-choice test	Standardized multiple-choice test	50%
10.5 Seminar/laboratory	Average grade of the current exams	Evaluation in progress	10%
	Grade for the practical exam	practical exam	40%
10.6 Minimum Performance Standard			
Interpretation of the concepts of diagnosis of the main diseases			

Date: 15.05.2025	Signature of the discipline coordinator:	Holder of the seminar activities:
	<p>1.- Lect.Dr. HUNEA Iuliana, MD, PhD (Year II)</p> <p>2.- Lect.Dr. PADUREANU Liliana, MD, PhD (Years (III-V))</p>	<p>1.-Lect.Dr. HUNEA Iuliana, MD, PhD (ANUL VI)</p> <p>2.- Lect.Dr. PADUREANU Liliana, MD, PhD (Years (III-V))</p>
Date of approval in the Department		
Signature of the Director of Department		

Reprezentant legal F.D.M.
 Presedinte
 Prof. Univ. Dr. POSTĂVARU Nicolae