



## CLINICAL IMMUNOLOGY

<b>1. IMPRINT</b>	
<b>Academic Year</b>	2024/2025
<b>Department</b>	Faculty of Medicine
<b>Field of study</b>	Medicine
<b>Main scientific discipline</b>	Medical sciences
<b>Study Profile</b>	General academic
<b>Level of studies</b>	Uniform MSc
<b>Form of studies</b>	Full time studies
<b>Type of module / course</b>	Obligatory
<b>Form of verification of learning outcomes</b>	Credit
<b>Educational Unit / Educational Units</b>	<b>Department of Clinical Immunology</b> Nowogrodzka 59 St, 02-006 Warsaw Tel.: (+48 22) 502 14 72, 502 12 60 Faks: (+48 22) 502 21 59 Secretary: Ewa Rusinowicz <ewa.rusinowicz(at)uckwum.pl> <a href="https://zik.wum.edu.pl/">https://zik.wum.edu.pl/</a>
<b>Head of Educational Unit / Heads of Educational Units</b>	Prof. dr hab. Leszek Pączek <leszek.paczek(at)wum.edu.pl>
<b>Course coordinator</b>	Dr hab. Beata Kaleta <beata.kaleta(at)wum.edu.pl>
<b>Person responsible for syllabus</b>	Dr hab. Beata Kaleta <beata.kaleta(at)wum.edu.pl>
<b>Teachers</b>	Prof. hab. n. med. Leszek Pączek Dr hab. n. med. Radosław Zagożdżon Dr hab. n. med. i n. o zdr. Beata Kaleta Dr hab. n. med. i n. o zdr. Ryszard Międzybrodzki Dr hab. n. med. i n. o zdr. Jan Borysowski

	Dr n. med. Monika Kniotek Dr n. med. Barbara Moszczuk Lek. Emilia Kniota Dr n. med. Grzegorz Senatorski Mgr inż. Marta Bryła
--	--

<b>2. BASIC INFORMATION</b>			
<b>Year and semester of studies</b>	IV year, 7 semester	<b>Number of ECTS credits</b>	1.00
<b>FORMS OF CLASSES</b>		<b>Number of hours</b>	<b>ECTS credits calculation</b>
<b>Contacting hours with academic teacher</b>			
Lecture (L)			
Seminar (S)		10	0.5
Classes (C)			
e-learning (e-L)			
Practical classes (PC)		10	0.5
Work placement (WP)			
<b>Unassisted student's work</b>			
Preparation for classes and completions			

<b>3. COURSE OBJECTIVES</b>	
O1	Presentation of aspects of immunological diagnostics (autoimmune and inflammatory diseases and organ transplantation)
O2	Presentation of aspects of organ transplantation, aftercare for patients with transplanted organs
O3	Presentation of aspects of autoimmune disorders

<b>4. STANDARDS OF LEARNING – DETAILED DESCRIPTION OF EFFECTS OF LEARNING</b>	
<b>Code and number of the effect of learning in accordance with standards of learning</b>	<b>Effects in the field of:</b> <i>(in accordance with appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019)</i>

<b>Knowledge – Graduate* knows and understands:</b>	
G.K1	basics of diagnostics of gene and chromosomal mutations responsible for hereditary and acquired diseases, including cancer (C.W9)
G.K2	issues in the field of tumor immunology (C.W24)
G.K3	genetic bases of donor and recipient selection and basics of transplant immunology (C.W25)
G.K4	clinical forms of the most common diseases of systems and organs, metabolic diseases and disorders of water-electrolyte, hormonal and acid-base balance (C.W34)
G.K5	main mechanisms of drug action and their changes in the system depending on age (C.W36)
G.K6	major drug side effects, including drug interactions (C.W37)
G.K7	the possibilities of modern cancer therapy, including multimodal therapy, the prospects of cell and gene therapy and their undesirable effects (E.W25)
G.K8	theoretical and practical laboratory diagnostics (E.W40)
G.K9	the basic scope the issues of surgical transplantation, indications for the transplantation of irreversibly damaged organs and tissues, and related procedures (F.W14)

<b>Skills– Graduate* is able to:</b>	
G.S1	use the antigen-antibody reaction in current modifications and techniques for the diagnosis of infectious, allergic, autoimmune and neoplastic diseases and blood diseases (C.U8)
G.S2	associate the images of tissue and organ damage with clinical symptoms of the disease, history and laboratory results (C.U11)
G.S3	collect and bank biological material for research used in laboratory diagnostics (E.U28)

\* In appendix to the Regulation of Minister of Science and Higher education from 26th of July 2019 „graduate”, not student is mentioned.

<b>5. ADDITIONAL EFFECTS OF LEARNING (non-compulsory)</b>	
<b>Number of effect of learning</b>	<b>Effects in the fields of:</b>
<b>Knowledge – Graduate knows and understands:</b>	
K1	
K2	
<b>Skills– Graduate is able to:</b>	
S1	
S2	
<b>Social Competencies – Graduate is ready for:</b>	

SC1	
SC2	

<b>6. CLASSES</b>		
Form of class	Class contents	Effects of Learning
Seminars (S1-S10)	S1- Introduction to clinical immunology – part 1 S2 - The role of autoimmunity in the pathogenesis of diseases S3 - The role of autoimmunity in the pathogenesis of endocrine system diseases S4 - Immunology of atherosclerosis S5 - Immunology of pregnancy S6 - The role of vitamin D and vitamin D receptor in autoimmune diseases S7 - Cancer as a complication of immunosuppressive therapy – part 1 S8 - Posttransplant complications S9 - HLA typing in clinical immunology - principles of selecting the donor/recipient pairs S10 - Flow cytometry - protocol, principle, basics, applications	G.K1-G.K9
Practical classes (PC1-PC10)	PC1 - Posttransplant complications (immunosuppression) – part 1 PC2 - Posttransplant complications (immunosuppression) – part 2 PC3 - Case presentation: asthma, SLE, vasculitis and vasculiologies, rheumatoid disease PC4 - Case presentation: Immunocompromised patients PC5 - Case presentation: primary immunodeficiency patients PC6 - Case presentation: autoinflammatory diseases PC7 - HLA typing in clinical immunology PC8 - Proliferation assay and other immunological tests as a measure of immune competence PC9 - Flow cytometry in clinical immunology PC10 - Clinical aspects of immunosuppression	G.S1-G.S3

<b>7. LITERATURE</b>
<b>Obligatory</b>
Male D., Brostoff J., Rotth D. B., Roitt I.: “Immunology” – seventh edition – 2006, Mosby Elsevier.
<b>Supplementary</b>
1. Abul K. Abbas, Andrew H. Lichtman: “Basic Immunology – Functions and Disorders of the Immune System” . 2. David M. Edgar: “Immunology-Master Medicine” (A core text with self – assessment) – 2005, Elsevier Churchill Livingstone 3. Robert R. Rich, Thomas A. Fleisher, William T. Shearer, Harry W. Schroeder Jr, Anthony J. Frew, Cornelia M. Weyand: “Clinical Immunology: Principles and Practice”, Third Edition 2008. Mosby Elsevier. 4. Reginald M. Gorczyński, Jaqueline Stanley: “Problem–Based Immunology”. 2006, Saunders Elsevier.

## 8. VERIFYING THE EFFECT OF LEARNING

Code of the course effect of learning	Ways of verifying the effect of learning	Completion criterion
G.K1-G.K9, G.S1-G.S3	Credit – single choice test (25 questions)	GRADE CRITERIA: <ul style="list-style-type: none"><li>• 2.0 (failed): below 15 points (below 60%)</li><li>• 3.0 (satisfactory): points range from 15-17</li><li>• 3.5 (rather good): points range from 18-19</li><li>• 4.0 (good): points range from 20-22</li><li>• 4.5 (more than good): points range from 23-24</li><li>• 5.0 (very good): 25 points</li></ul>

## 9. ADDITIONAL INFORMATION

1. Classes are held from 8.30 am to 12.15 pm in the Lindleya campus.
2. Department's website: <https://zik.wum.edu.pl/en/node/70>
3. The student's presence at all classes is obligatory.
4. The student is required to change shoes, have an apron and a stethoscope.
5. Only healthy students may participate in practical classes.
6. The final test takes place on Fridays after classes.
7. If the student fails the test, the student should contact the course coordinator ([beata.kaleta@wum.edu.pl](mailto:beata.kaleta@wum.edu.pl)) as soon as possible to arrange the date of the retake test.
8. If a student wants to change the dean's group (eg. to do their homework with another group), it is possible only if the group does not exceed 24 people. Such changes must be agreed in advance with the class coordinator.
9. Teaching consultations - after prior appointment with the Head of the Unit: [<leszek.paczek \(at\) wum.edu.pl>](mailto:leszek.paczek@wum.edu.pl)

Medical University of Warsaw has property rights, including copyright, to the syllabus. The syllabus may be used for educational purposes at the MUW only. Using of the syllabus for other purposes requires consent of the MUW.

### ATTENTION

The final 10 minutes of the last class of the block/semester/year should be allotted for students to fill out the Survey of Evaluation of Classes and Academic Teachers