



Educational objectives (max. 6 items)
C1. Understanding the current diagnostic methods as well as emerging therapies of immune-mediated diseases related to the hypersensitivity reactions type I-IV by Gell and Coombs, that will find clinical application in various medical specialties in the near future. The course will be focused on approaches which are currently elaborated in research laboratories and/ or are in the clinical trials.

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 summarizing)	Form of didactic class <i>**enter the abbreviation</i>
K 01	C.W23.	Describes the pathomechanisms of hypersensitivity-mediated diseases	Credit test	MC
S 01	C.U8.	Indicate the assays useful in the immune-mediated disease assessment. Perform skin tests. Correctly interpret results of the skin tests used in the diagnosis of allergy	Observe preformation of the tests, perform selected test on its own, interpret results on its own	MC

** 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 .

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: 4

Social competences: 4

Student's amount of work (balance of ECTS points)

Student's workload (class participation, activity, preparation, etc.)	Student Workload (h)
1. Contact hours:	30
2. Student's own work (self-study):	9
Total student's workload	39
ECTS points for module/course	1,5
Comments	

Content of classes (please enter topic words of specific classes divided into their didactic form and remember how it is translated to intended educational effects)

Practical classes

1. An overview of recent reports in immunology - the mechanisms of resistance and tolerance.
2. Cell isolation and identification. Flow cytometry, cell sorting systems. Applications used in diagnostics hypersensitivities and autoimmunities.
3. Hypersensitivities reactions diagnostics *in vitro* – component diagnostic.
4. Hypersensitivity reactions diagnostics *in vivo*. Allergen provocation tests.
5. Food allergies.
6. Antibodies based diagnostics in autoimmunity diseases.
7. Immunotherapy.
8. Contact hypersensitivities reactions diagnostics *in vitro* and *in vivo*.
9. New approaches in hypersensitivities treatment and diagnostics: cell culturing methods, CRISPR Cas9.
10. Written test and discussion.



<p>Basic literature (list according to importance, no more than 3 items)</p> <ol style="list-style-type: none"> 1. D. Male, J. Brostoff, D. Roth & I. Roitt: "Immunology", 8th Edition, Elsevier, 2013. 2. K. Abbas, A. H. Lichtman, S. Pillai: "Cellular and Molecular Immunology"; 6th Edition, Elsevier, 2012. 3. M. Peakman, D. Vergani: "Basic and Clinical Immunology"; 2nd edition, Elsevier – Churchill Livingstone, 2009 Nature reviews. Immunology. Nature New York, London. <p>Additional literature and other materials (no more than 3 items)</p> <ol style="list-style-type: none"> 4. "Nature reviews. Immunology. Nature" New York, London 5. "Allergy: European Journal of Allergy and Clinical Immunology"; Wiley Blackwell, Journal of Allergy and Clinical Immunology. Elsevier. 	
<p>Didactic resources requirements (e.g. laboratory, multimedia projector, other...)</p> <ul style="list-style-type: none"> ▪ Multimedia projector, computers, boards, pointers. ▪ Laboratory, centrifuges, light microscopes, fluorescent microscopes, lab dishes, lymphocyte isolation kits, surface antigen staining kits, autoantibody detection kits, allergen kits for skin prick tests, lab consumables. 	
<p>Preliminary conditions (minimum requirements to be met by the student before starting the module/course)</p> <p>Credited courses: Anatomy, Histology with Cytology, Physiology (years I and II) on the level of 3rd year ED students requirements.</p>	
<p>Conditions to receive credit for the course (specify the form, criteria and conditions of receiving credit for classes included in the module/course, admission terms to final theoretical or practical examination, its form and requirements to be met by the student to pass it and criteria for specific grades).</p> <ul style="list-style-type: none"> ▪ Each absence must be made up, including rector's days or dean's hours. ▪ Self-performance, read-out and interpretation of skin test and laboratory tests. Activity during discussions. ▪ Attendance at classes. Absence crediting possible maximally for 2 classes (crediting possible during consultation hours with the teacher who lead the class). ▪ Fulfillment of written final single-choice test (15 questions). ▪ In the case of rector's/deans hours/days, student is obliged to prepare a presentation on a specified topic (after consultation with the teacher). 	
Grade:	Criteria for course
Very Good (5.0)	15 points (100%)
Good Plus (4.5)	13-14 points (86,6-93,3%)
Good (4.0)	11-12 points (73,3-80%)
Satisfactory Plus (3.5)	10 points (66,6%)
Satisfactory (3.0)	9 points (60%)
Grade:	Criteria for exam (if applicable)
Very Good (5.0)	
Good Plus (4.5)	
Good (4.0)	
Satisfactory Plus (3.5)	
Satisfactory (3.0)	



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Person responsible for course:	Prof. Dr hab Marek Jutel
Phone	71 778 41740
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<i>List of persons conducting specific classes:</i>	<i>degree/scientific or professional title</i>	<i>Discipline</i>	<i>Performer profession</i>	<i>Form of classes</i>
Paweł Gajdanowicz	PhD	Medical biology	adiunct	MC
Ewa Wyrodek	PhD	Medical biology	lectruer	MC
Anna Kosowska	MD	Medicine	asistent	MC
Magdalena Zemelka-Wiącek	PhD	Medical Biology	adiunct	MC
Sylwia Smolińska	PhD	Medical Biology	adiunct	MC
Marek Jutel	Prof, MD	Medicine	director	MC

Date of Syllabus development

27.06.2020

Syllabus developed by

Magdalena Zemelka-Wiącek, Phd
Course Coordinator for the ED Students
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Signature of Faculty Dean


Wrocław Medical University
Faculty of Medicine
Wrocław
prof. Beata Sobieszcańska, PhD

Signature of Head of teaching unit
KATEDRA I ZAKŁAD
IMMUNOLOGII KLINICZNEJ
kierownik

prof. dr hab. med. Marek Jutel