

DESCRIPTION OF THE COURSE OF STUDY

Course code	0912-7LEK-F-17-IO	
Name of the course in	Polish	Immunologia onkologiczna
	English	Oncological immunology

1. LOCATION OF THE COURSE OF STUDY WITHIN THE SYSTEM OF STUDIES

1.1. Field of study	medicine
1.2. Mode of study	Full-time
1.3. Level of study	Uniform Master's studies
1.4. Profile of study*	General academic
1.5. Specialization*	Lack
1.6. Unit running the course of study	The Faculty of Medicine and Health Sciences
1.7. Person/s preparing the course description	dr hab. n. med. Marcin Pasiarski, prof. UJK
1.8. Person responsible for the course of study	dr hab. n. med. Marcin Pasiarski, prof. UJK
1.9. Contact	marcinpasiarski@gmail.com

2. GENERAL CHARACTERISTICS OF THE COURSE OF STUDY

2.1. Affiliation with the module	elective
2.2. Language of instruction	English
2.3. Semesters in which the course of study is offered	4 th semester
2.4. Prerequisites*	Anatomy, Histology, Physiology, Pathophysiology, Microbiology, Immunology

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes	lecture – 15 hours	
3.2. Place of classes	Teaching room of the Department of Hematology, Holycross Cancer Center	
3.3. Form of assessment	Credit with grade	
3.4. Teaching methods	Practical Classes, Case studies, Discussion, Seminars	
3.5. Bibliography	Required reading	<ul style="list-style-type: none"> Basic immunology Function and disorders of the immune system 5e (5th Edition) by Abul K. Abbas, Shiv Pillai Immunology: A Short Course (Coico, Immunology) 7th Edition by Richard
	Further reading	<ul style="list-style-type: none"> Microbiology and Immunology (Board Review Series) Sixth Edition by Louise Hawley MD, Benjamin Clarke Ph.D, Richard J. Ziegler PhD Autoantibodies, 3rd Edition (editors: Shoenfeld, Meroni, Gershwin)

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED TEACHING OUTCOMES

<p>4.1. Course objectives (lecture)</p> <p>The student should acquire knowledge in the scope of:</p> <p>C1. TUMOR IMMUNOLOGY (cell types involved in tumor recognition and rejection, the "immune synapse", tumor evasion of immune surveillance); lecture</p> <p>C2. CYTOKINES AND COSTIMULATORY RECEPTORS IN CANCER TREATMENT – CURRENT KNOWLEDGE AND PERSPECTIVES; lecture</p> <p>C3. CHECKPOINT INHIBITORS IN CANCER TREATMENT (CLTA-4, PD-1/PDL-1/2, other potential targets, combination strategies); lecture</p> <p>C4. MANIPULATING T CELLS IN ANTICANCER THERAPY (chimeric antigen receptors, ex vivo expansion of tumor-infiltrating lymphocytes, CD3-directed therapies); lecture</p>

<p>C5. ANTICANCER VACCINES AND ONCOLYTIC VIRUSES; lecture C6. THERAPIES DIRECTED AT OTHER CELL TYPES IN TUMOR MICROENVIRONMENT (natural killer cells, macrophages, IDO); lecture C7. IMMUNE RESPONSE CRITERIA AND PREDICTORS OF RESPONSE TO IMMUNE-BASED THERAPY; lecture C8. INFECTIONS AND CANCERS; lecture</p>
<p>4.2. Detailed syllabus (lecture) LECTURE 1. Tumor immunology (cell types involved in tumor recognition and rejection, the "immune synapse", tumor evasion of immune surveillance) (duration of the meeting 1x45 minutes) LECTURE 2. Cytokines and costimulatory receptors in cancer treatment – current knowledge and perspectives (duration of the meeting 2x45 minutes) LECTURE 3. Checkpoint inhibitors in cancer treatment (CTLA-4, PD-1/PDL-1/2, other potential targets, combination strategies) (duration of the meeting 2x45 minutes) LECTURE 4. Manipulating t cells in anticancer therapy (chimeric antigen receptors, ex vivo expansion of tumor-infiltrating lymphocytes, CD3-directed therapies) (duration of the meeting 2x45 minutes) LECTURE 5. Anticancer vaccines and oncolytic viruses (duration of the meeting 2x45 minutes) LECTURE 6. Therapies directed at other cell types in tumor microenvironment (natural killer cells, macrophages, IDO) (duration of the meeting 2x45 minutes) LECTURE 7. Immune response criteria and predictors of response to immune-based therapy (duration of the meeting 2x45 minutes) LECTURE 8. Infections and cancers (duration of the meeting 2x45 minutes)</p>

4.3. Education outcomes in the discipline

Code	A student, who passed the course	Relation to teaching outcomes
within the scope of KNOWLEDGE:		
W01	knows the basis for the development and the mechanisms of the immune system, including specific and non-specific mechanisms of humoral and cellular immunity;	C.W20.
W04	understands the issues concerning the immunology of cancer;	C.W23.
within the scope of ABILITIES:		
U01	uses the antigen - antibody reaction in current modifications and techniques for the diagnosis of infectious diseases, allergies, autoimmune diseases, blood diseases and cancer;	C.U8.
U02	analyses defensive and adaptation reactions as well as regulation disorders caused by the etiological factor;	C.U12.

4.4. Methods of assessment of the intended teaching outcomes

Teaching outcomes (code)	Method of assessment (+/-)																				
	Exam oral/written*			Test*			Project*			Effort in class*			Self-study*			Group work*			Others*		
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes					
	C	L	...	C	L	...	C	L	...	C	L	...	C	L	...	C	L	...	C	L	...
W01	-	+		-	+		-	+		-	+		-	+		-	+		-	-	
W04	-	+		-	+		-	+		-	+		-	+		-	+		-	-	
U01	-	+		-	+		-	+		-	+		-	+		-	+		-	-	
U02	-	+		-	+		-	+		-	+		-	+		-	+		-	-	

*delete as appropriate

4.5. Criteria of assessment of the intended teaching outcomes		
Form of classes	Grade	Criterion of assessment
classes (C)*	3	From 61%-68% Learning programme content on the basic level, replies chaotic, leading questions necessary.
	3,5	From 69%-76% Learning programme content on the basic level, answers systematized, requires assistance from the teacher.
	4	77%-84% Learning programme content on the basic level, answers systematized, independent. Solving of problems in typical situations
	4,5	From 85%-92% The scope of presented knowledge exceeds the basic level based on the supplementary literature provided. Solving of problems in new complex situations
	5	From 93%-100% The scope of presented knowledge goes beyond the primary level based on independently gained scientific sources of information

- **Thresholds are valid from 2018/ 2019 academic year**

5. BALANCE OF ECTS CREDITS – STUDENT’S WORK INPUT

Category	Student's workload
	Full-time studies
<i>NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/</i>	15
<i>Participation in lectures*</i>	15
<i>Participation in classes, seminars, laboratories*</i>	
<i>Preparation in the exam/ final test*</i>	
<i>Others*</i>	
<i>INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/</i>	10
<i>Preparation for the lecture*</i>	10
<i>Preparation for the classes, seminars, laboratories*</i>	
<i>Preparation for the exam/test*</i>	
<i>Gathering materials for the project/Internet query*</i>	
<i>Preparation of multimedia presentation</i>	
<i>Others*</i>	
<i>TOTAL NUMBER OF HOURS</i>	25
ECTS credits for the course of study	1

Accepted for execution (date and signatures of the teachers running the course in the given academic year)

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