Course description

Part 1

General information about the course		
1. Major of study: medicine	**2. Study level:** unified MSc	
	3. Form of study: intramural	
4. Year: III	**5. Semester**: VI	
6. Course name: Immunology		
7. Course status: required		

8. Course objectives

Antigens, antibodies, structure and meaning of the immune system. Cellular and humoral basics of immunity. Major histocompatibility complex. Specific and non-specific mechanisms of cellular and humoral immunity. Cytokines: division, basic properties and therapeutic application. Structure, properties of antibodies and their diversity. Immunoglobulin preparations, monoclonal antibodies and their use. Complement - activation pathways, biological functions. Acute phase proteins. Populations, subpopulations of lymphocytes: T, B, NK and their markers. Phagocytosis - types and its biological role. Functions of macrophages and granulocytes.

Hypersensitivity. Autoimmune diseases. Immunodeficiency. Anti-infectious immunity. Tumor immunity. Transplantation immunology. Immunohematology. Collection and transmission of materials for immunological tests. Pre-transfusion and pre-transplant tests. Basics of blood selection for transfusion and transplanted organs. Maternal-fetal serological conflict. Evaluation of the functioning of humoral and cellular immunity.

Learning outcomes / reference to learning outcomes indicated in (underline as appropriate):
education standards (Regulation of the Ministry of Science and Higher Education) / Resolution of the Senate of the Medical University of Silesia (indicate terms specified in education standards / signs of learning outcomes approved by the Resolution of the Senate of the Medical University of Silesia)
For knowledge student knows and understands: C.W6 C.W21, C.W22, C.W23,C.W24,C.W25
For skills student can do: C.U8
For social competencies student is ready to: II 3C, II 3

9. Number of hours for the course	60	**10. Number of ECTS points for the course**	4

11. Form of evaluation: grade credit

12. Methods of verification and evaluation of learning outcomes

Learning outcomes	Methods of verification	Methods of evaluation*/ credit
Knowledge	Grade credit – MCQ Grade credit – MCQ (2 middle exams during semester)	*** Very good (5,0)** – the assumed learning outcomes have been achieved and significantly exceed the required level **Better than good (4,5)** – the assumed learning outcomes have been achieved and slightly exceed the required level **Good (4,0)** – the assumed learning outcomes have been achieved at the required level **Better than satisfactory (3,5)** – the assumed learning outcomes have been achieved at the average required level

		Satisfactory (3,0) – the assumed learning outcomes have been achieved at the minimum required level **Unsatisfactory (2,0)** – the assumed learning outcomes have not been achieved
Skills	Report Observation Practical exam Observation and *Practical Exam (on the end of lab. classes**)**	* Passing/or not
Competencies	Observation	* Observation

* For exams and grade credits the following evaluation system has been assumed:

Very good (5,0) – the assumed learning outcomes have been achieved and significantly exceed the required level
Better than good (4,5) – the assumed learning outcomes have been achieved and slightly exceed the required level
Good (4,0) – the assumed learning outcomes have been achieved at the required level
Better than satisfactory (3,5) – the assumed learning outcomes have been achieved at the average required level
Satisfactory (3,0) – the assumed learning outcomes have been achieved at the minimum required level
Unsatisfactory (2,0) – the assumed learning outcomes have not been achieved