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| **Syllabus** |
| **Description of the course** |
| **Module/Course****IMMUNOLOGY** | Immunology | **Group of detailed education results**  |
| **Group code C** | **Group name**Before clinical |
| **Faculty** | Medicine and Dentistry |
| **Major**  | Medicine |
| **Specialties** | Dentistry |
| **Level of studies** | Uniform magister studies X\*1st degree studies 2nd degree studies 3rd degree studies postgraduate studies  |
| **Form of studies** | X full-time part-time |
| **Year of studies**  | **II** | **Semester****IV** |  WinterX Summer |
| **Type of course** | **X** obligatory limited choice free choice / elective  |
| **Course** |  major basic |
| **Language of instruction** |  Polish **X** English other |
| \* mark with an **X** |
| **Number of hours** |
| Form of education |
| Unit teaching the course | Lectures (L) | Seminars (SE) | Auditorium classes (AC) | Major Classes – not clinical (MC) | Clinical Classes (CC) | Laboratory Classes (LC) | Classes in Simulated Conditions (CSC) | Practical Classes with Patient (PCP) | Specialist Classes – magister studies (SCM) | Foreign language Course (FLC) | Physical Education obligatory (PE) | Vocational Practice (VP) | Self-Study (Student's own work) | E-learning (EL) |
| **Winter Semester** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **Summer Semester** |
|  |  |  |  | **25** |  |  |  |  |  |  |  |  |  |  |
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| **TOTAL per year:** |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | **25** |  |  |  |  |  |  |  |  |  |  |
| **Educational objectives** (max. 6 items)**C1. The aim of the teaching is presentation and explanation of basic topics from immunology including: ontogenesis of the immune system.****C2. Explain the role of antigens and humoral antibodies in innate and adoptive immune response.****C3 Describe the regulation of the immune response, the goals of immunotherapy and immunomodulation.****C4. Explain the role of hypersensitivity and pathomechanisms of autoimmune disease and primary and secondary immunodeficiency.** |
| **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 summarising) | Form of didactic class*\*\*enter the abbreviation* |
| **W 01****W 02****W 03****W 04****W 05****W 06****W 07****W 08** | **C.W7****C.W8****C.W10****C.W11****C.W12****C.W13****C.W14****E.W16** | the student knows the structures of immunological system is able to define the innate and adoptive immunity, know mechanisms of hypersensitivity and autoimmunity the student know the rules of immunomodulation and immunodiagnostic possibilitiesknow pathomechanisms of allergic and autoimmune diseases, primary and secondary immunodeficiencyis able to describe the parameters of immunological defects understand pathomechanism of autoagressive disease and clinical symptomsthe student know the clinical and immunological parameters associated with non-specific immunological responseis able to define immunological factors in transplantation ,  | test consist of 30 questions,seminar prepared by student |  MC |
| **U 01****U 02****U 03** | **C.U2****C.U3****C.U4** | the student can perform immunoenzymatic test and explain different immunological results associated with activity of immune system- describe the level of immunological reactionthe student can perform immunoenzymatic test and explain different immunological results associated with activity of immune systemthe student is able to solves risk of dysfunction of immunological system led to development of disease  |  |  |
| **K 01** | **K01** | -the student is able to cooperate in the group during the laboratory practice- knows how to prepare an oral seminar presentation- can present immunological topic chosen by himself during seminar - is able to collect references for immunological topics. |  |  |
| \*\* 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: | 25 |
| 2. Student's own work (self-study): | 45,5 |
| Total student's workload | 70,5 |
| **ECTS points for module/course** | 2 |
| 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) |
| **Lectures**1.2.3. |
| **Seminars**1.2.3. |
| **Practical classes**1. Development of immune system. Components of immunological system.
2. Immunoglobulins – role in immunological response , monoclonal antibodies
3. Innate immune response.
4. Adoptive immune response, antigen presentation. Relation between innate and adoptive response.
5. Regulation of immunological response. Cellular and humoral factors of regulation.
6. Immunomodulation (activation, suppression) of immunological response.
7. Immunological tolerance.
8. Autoimmunity and autoimmune disease
9. Hypersensitivity (types I, II, III, IV).
10. Immunological response to infection. The role of immunological protection against infection.
11. Transplantation- immunological aspect
12. Immunopathology. Immunological protection against cancer development.
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| **Other****1.****2.****3.***etc. …* |
| **Basic literature** (list according to importance, no more than 3 items)1. D.Male, J. Brostoff, D.B. Roth. I. Roitt. „Immunology”-2014 year
2. J.K. Actor.” Immunology and microbiology. 2012 year

**Additional literature and other materials** (no more than 3 items)1.John B. Zabriskie . Essential Clinical Immunology. Cambrige University Press 2009 year. |
| **Didactic resources requirements** (e.g. laboratory, multimedia projector, other…)multimedia projector |
| **Preliminary conditions** (minimum requirements to be met by the student before starting the module/course)Basic knowledge from biology , pathophysiology  |
| **Conditions to receive credit for the course** (specify the form 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 med by the student to pass it and criteria for specific grades)Oral presentation – topic from immunologyPassed the text  |
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| **Grade:** | **Criteria** (only for courses/modules ending with an examination) |
| Very Good(5.0) |  |
| Good Plus (4.5) |  |
| Good(4.0) |  |
| Satisfactory Plus (3.5) |  |
| Satisfactory (3.0) |  |
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| **Name and address of module/course teaching unit, contact: telephone and e-mail address** Department of Immunopathology and Molecular Biology, Borowska 213, Wrocław julia.bar@umed.wroc.pl..………………………………………………………………………………………………………………**Coordinator / Person responsible for module/course, contact: telephone and e-mail address**Prof. dr hab. Julia BarDepartment of Immunopathology and Molecular Biology, e-mail: Julia.bar@umed.wroc.pl Borowska 213, Wrocław julia.bar@umed.wroc.pl………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**List of persons conducting specific classes: full name, degree/scientific or professional title, discipline, performed profession, form of classes**Prof. dr hab. Julia Bar Dr Iwona Kamińska

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| **Date of Syllabus development**  | **Syllabus developed by**  |
|  12 June 2019 | Prof. dr hab. Julia Bar |
| **Signature of Head of teaching unit** |
|  Prof. dr hab. Julia Bar  |

**Signature of Faculty Dean**  |
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