**SYLLABUS**

**Fall semester 2022-2023 academic years**

**on the educational program**

 **6B10103- “GENERAL MEDICINE”**

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| **Discipline’s code** | **Discipline’s title** | **Independent work of students (IWS)** | **Number of credits** | **Number of credits** | **Independent work of student with teacher (IWST)** |
| **Lectures (L)** | **Practical training (PT)** | **Laboratory (Lab)** |
| KI6(7)309 | **Clinical Immunology**  | 40 | - | 160 | - | 8 | 40 |
| **Academic course information** |
| **Form of education** | **Type of course**  | **Types of lectures** | **Types of practical training**  | **Form of final control**1. Testing,2. Mini Clinical Exam |
|  |  |  |  |
| Lecturer  | Doctor of Med. Sci Kurmanova Almagul |  |
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| Telephone number |  |  |

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| **Aim of course**  | **Expected Learning Outcomes (LO)\***As a result of studying the discipline the undergraduate will be able to: | **Indicators of LO achievement (ID)**(for each LO at least 2 indicators) |
| the development of knowledge on modern immunological diagnostics in internal medicine, the role of the immune system in the pathogenesis of systemic diseases, autoimmune diseases, immune-oriented therapy and immunological monitoring. | 1. identify and interpret the clinical symptoms and syndromes, the data of laboratory and instrumental methods for the study of patients with the most common allergic, autoimmune, hematological, onokological diseases, immunodeficiencies in their typical manifestation and course and in the age aspect;
 | 1.1. 1.2. 1.3.  |
| 1. possess modern methods of immunodiagnostics and immunoprophylaxis, the means and methods of immuno-oriented therapy;
 | 2.1. 2.2. 2.3. |
| 1. possess the skills of basic medical, diagnostic and preventive measures to assist with immuno-dependent pathology;
 | 3.1. 3.2.3.3. |
| 1. use the skills of current accounting and reporting medical records, including information systems;
 | 4.1. 4.2 4.3.  |
| 1. demonstrate skills in the integration of knowledge and skills to ensure an individual approach in the treatment of a particular patient; make professional decisions based on the analysis of the rationality of diagnosis and the principles of evidence-based medicine;
 | 5.1 5.2 5.3 |
|  | 1. possess the skills of effective communication with building trusting relationships with patients, with relatives;
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|  | 1. identify gaps in their knowledge and skills, constantly improve their professional level; apply the skills necessary for continuous personal growth and lifelong learning;
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|  | 1. deepen the professional knowledge and skills acquired during the previous years of study.
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|  | 1. to work effectively as a member of a multidisciplinary team in university and accredited university clinics under the guidance of a mentor;
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|  | 1. participate in scientific research; plan, carry out and analyze factors affecting human health, using methods of forecasting, designing and modeling processes and phenomena in the field of health and biomedical research.
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| **Prerequisites** | Bachelor's degree  |
| **Post requisites** | Family medicine |
| **Information resources \*\*** | **Literature:\*\***1. I.Roitt. Essential of Clinical Immunology. Wiley-Blackwell, 2014,377 p.**Additional literature:**1. Rabson A.et al. Really Essential Medical Immunology. Blackwell, 2005, 223 p.
2. Breaking new ground in immunology, 2021,10x genomics.com
3. Immune checkpoint. Targerts for immune-oncology research.www.leinco.com

**Internet resources:**1. <http://elibrary.kaznu.kz/ru>
2. Medscape.com
3. Clinical.corroption.com
4. Oxfordmedicine.com
5. [Uptodate.com](http://www.uptodate.com)
6. [research.nhgri.nih.gov](http://research.nhgri.nih.gov/)
7. [ncbi.nlm.nih.gov/PubMed/](http://www.ncbi.nlm.nih.gov/PubMed/)
8. [medline.com](http://www.medline.com)
9. сlinical Learning by ELSEVIER

**Professional database**1. <https://medelement.com/>
2. <https://www.cochranelibrary.com>
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| **Academic policy of the course in the context of university moral and ethical values** | **Academic values:**Practical/laboratory exercises, SIW should be independent, creative. Plagiarism, forgery, the use of cheat sheets, cheating at all stages of control are unacceptable. **Rules of academic conduct:**1) Appearance:* surgical suit
* medical mask
* medical cap
* medical gloves
* interchangeable shoes
* neat hairstyle, neat nails
* badge with full name (full name)

2) Mandatory availability of a sanitary book with a current permit3) Mandatory observance of the rules of personal hygiene and safety4) Systematic preparation for the educational process.5) Accurate and timely maintenance of reporting documentation.6) Active participation in medical-diagnostic and public events of the departments.Discipline:* It is not allowed to be late for classes or the morning conference. In case of being late, the decision on admission to the lesson is made by the teacher leading the lesson. After the third delay, he writes an explanatory note addressed to the head of the department indicating the reasons for being late and is sent to the dean's office to obtain admission to the lesson.
* Leaving the class ahead of time, being outside the workplace during school hours is regarded as absenteeism.
* Additional work of students during study hours (during practical classes and shifts) is not allowed.
* For students who have more than 3 passes without notifying the curator and with a good reason, a report is issued with a recommendation for expulsion (the basis for expulsion is missing 36 hours without a good reason)
* Missed classes will not be made up.
* The internal regulations of KazNU and clinical bases are fully applied to students

**Academic values:**Academic honesty and integrity: independence in completing all assignments; the inadmissibility of plagiarism, forgery, the use of cheat sheets, cheating at all stages of knowledge control, deception of the teacher and disrespectful attitude towards him.Students with disabilities can receive counseling at e-mail alm\_kurmanova@mail.ru |
| **Evaluation and attestation policy** | **Criteria-based evaluation:** assessment of learning outcomes in relation to descriptors (verification of the formation of competencies in midterm control and exams).**Summative evaluation:** assessment of work activity in an audience (at a webinar); assessment of the completed task. |

**CALENDAR (SCHEDULE) THE IMPLEMENTATION OF THE COURSE CONTENT:**

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| № | Title  | Number of hours | Maximum score |
|  |  **Module 1. Infectious immunology** | ***48/12*** |  |
|  | Normal immune response in infectious diseases | 6/1,5 |  |
|  | Acute viral infections | 6/1,5 |  |
|  | COVID19 - SARSCov2 - immunopathogenesis | 6/1,5 |  |
|  | Chronic viral infections - HBV, HCV, HDV | 6/1,5 |  |
|  | Herpes viral infections | 6/1,5 |  |
|  | Slow viral infections | 6/1,5 |  |
|  | Chronic bacterial infections | 6/1,5 |  |
|  | Especially dangerous infections | 6/1,5 |  |
|  | ***BC -1***  |  | **100** |
| ***Module 2. Immunodeficiency states and AIDS*** | ***42/10,5*** |  |
|  | Primary immunodeficiencies - B-cell | 6/1,5 |  |
|  | Primary immunodeficiencies - T-cell | 6/1,5 |  |
|  | Acquired immunodeficiency states | 6/1,5 |  |
|  | Immunorehabilitation methods | 6/1,5 |  |
|  | Immunorehabilitation of patients after COVID19 | 6/1,5 |  |
|  | Multi-inflammatory syndrome associated with COVID19 | 6/1,5 |  |
|  | Biological therapy | 6/1,5 |  |
|  | ***Midterm***  |  | **100** |
| ***Module 3. Immunodiagnostics*** | ***48/12*** |  |
|  | Methods for immunodiagnosis of infectious diseases | 6/1,5 |  |
|  | Errors in the interpretation of serological diagnostic results | 6/1,5 |  |
|  | normal Immunogram  | 6/1,5 |  |
|  | Interpretation of an immunogram for various pathologies | 6/1,5 |  |
|  | The choice of the method of immunocorrection based on the immunogram | 6/1,5 |  |
|  | Vaccinology, types of vaccines | 6/1,5 |  |
|  | Vaccination in the prevention of oncopathology | 6/1,5 |  |
|  | Vaccination of special patient groups | 6/1,5 |  |
|  | ***BC-2*** |  | **100** |
|  | ***Final control*** *(1step+2step):* |  |  |
|  | 1. step – Тest
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|  | 1. step – MiniCEX
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|  |  | **160/40** |  |

Dean \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Head of Department \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lecturer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_