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| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  | <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.1 из 28                                                                                             |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

## Silabus

Department of Chemistry, Biochemistry and Molecular Biology  
Department of Pathology and Forensic Medicine  
Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology  
Department of Propaedeutics of Internal Diseases  
Department of Pediatrics-1  
Department of Phthisiopulmonology and Radiology

**Working curriculum of the discipline**  
**"Musculoskeletal system and skin in pathology"**  
**Educational program 6B10115 "Medicine"**

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| 1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | General information about the discipline                                  |                                                          |                                 |
| 1.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Discipline code: ODAKP 3304                                               | 1.6                                                      | Academic year: 2024-2025        |
| 1.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Discipline name: Musculoskeletal system and skin in pathology             | 1.7                                                      | Course: 3                       |
| 1.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Prerequisites: General pathology, musculoskeletal system and skin in norm | 1.8                                                      | Semester: 6                     |
| 1.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Postrequisites: Diseases of the musculoskeletal system and skin           | 1.9                                                      | Number of credits (ECTS): 5/150 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Cycle: BD                                                                 | 1.10                                                     | Component: BK                   |
| 2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Description of the discipline                                             |                                                          |                                 |
| Integrated discipline: formation of fundamental knowledge on the basics of semiotics, syndromology, physical examination methods and the main parameters of laboratory research, issues of etiology, pathogenesis, morphogenesis, biological characteristics of microorganisms, radiation diagnostics of frequently occurring pathological processes of the musculoskeletal system and skin, acquisition of skills in choosing research methods for diagnostics and drugs for the treatment of the most common diseases in adults and children. |                                                                           |                                                          |                                 |
| 3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Summative assessment form                                                 |                                                          |                                 |
| 3.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ● Testing 3.5 Coursework                                                  | ● Testing 3.5 Coursework                                 |                                 |
| 3.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Written 3.6 Essay                                                         | Written 3.6 Essay                                        |                                 |
| 3.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Oral 3.7 Project                                                          | Oral 3.7 Project                                         |                                 |
| 3.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ● OSPE/OSKE or practical skills test 3.8 Other (specify)                  | ● OSPE/OSKE or practical skills test 3.8 Other (specify) |                                 |

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| <p>ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  |  <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.2 из 28                                                                                                                                                                              |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

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| <b>4. Discipline objectives</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                           |
| <p>1. Formation of a holistic understanding of the pathology of the musculoskeletal system and skin, based on symptoms and syndromes, as well as on the methods of their study.</p> <p>2. Ensuring the achievement of the final learning outcomes based on the joint study of the pathology of the musculoskeletal system and skin on the propaedeutics of internal and pediatric diseases with fundamental disciplines.</p> <p>3. Formation of clinical thinking skills based on knowledge of the pathophysiological mechanisms of the course, pathological changes, complications and outcomes of diseases, physical and clinical laboratory methods of examination and the choice of drugs in adults and children with the main clinical syndromes in the pathology of the musculoskeletal system and skin.</p> <p>4. Formation of research skills through the analysis of scientific articles, analysis of experimental studies and project activities.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                           |
| <b>5. Final learning outcomes (FO disciplines)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                           |
| PO1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Demonstrates knowledge and understanding of the basics of semiotics and syndromology, etiology, pathogenesis and morphogenesis of pathology of the musculoskeletal system and skin.                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                           |
| PO2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Proficient in methods of conducting interviews, physical examination of adults and children, uses clinical thinking in collecting information when drawing up an examination plan; outlines the scope of primary and additional studies to clarify the syndrome of damage in pathology of the musculoskeletal system and skin.                                                                                                                                                                                                                                                            |                                                                           |
| PO3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Uses clinical thinking in collecting information when interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathology of the musculoskeletal system and skin, formulates a syndromic diagnosis, fills out a medical history.                                                                                                                                                                                                                                                                                                          |                                                                           |
| PO4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Communicates information, ideas, problems and solutions to patients and their family members, knows the norms of ethics and deontology in communicating with patients, their relatives and colleagues. Determines pathological processes at the organ and cellular levels, interprets data on the pathophysiology and morphology of diseases taking into account the clinical data of patients, makes conclusions, explains the patterns of development of complications and outcomes of pathology of the musculoskeletal system and skin, evaluates the results of experimental studies. |                                                                           |
| PO5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Selects drugs in accordance with the diagnosis, writes prescriptions, determines the dosage regimen, recognizes adverse effects of drugs, predicts the development of side effects and interactions of drugs used in pathology of the musculoskeletal system and skin.                                                                                                                                                                                                                                                                                                                    |                                                                           |
| PO6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Analyzes professional literature when working with scientific articles, carries out a project, demonstrates a desire for continuous improvement of his/her activities.                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                           |
| PO7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Demonstrates knowledge and understanding of the basics of semiotics and syndromology, etiology, pathogenesis and morphogenesis of pathology of the musculoskeletal system and skin.                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                           |
| 5.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>PO disciplines</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Learning outcomes of the OP, which are associated with the PO disciplines |

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| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра пропедевтики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p>                                             | Стр.3 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                                                                        |             |

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|     | PO 1<br>PO 2<br>PO 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PO1 Apply in practice knowledge in the field of biomedical, clinical, epidemiological and socio-behavioral sciences, including generally accepted, developing and constantly updated knowledge for diagnosis, treatment, dynamic observation of the most common diseases.  |            |      |      |     |
|     | PO 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PO2 Maintain interpersonal and communication skills leading to effective exchange of information and cooperation with patients, their families and health care workers.                                                                                                    |            |      |      |     |
|     | PO 5<br>PO 6<br>PO 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PO6 Selects drugs in accordance with the diagnosis, writes prescriptions, determines the dosage regimen, recognizes adverse effects of drugs, predicts the development of side effects and interactions of drugs used in pathology of the musculoskeletal system and skin. |            |      |      |     |
| 6.  | Detailed information about the discipline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                            |            |      |      |     |
| 6.1 | <ul style="list-style-type: none"><li>• Location of the Department of Biology and Biochemistry: Shymkent, Al-Farabi square, 1, main academic building of SKMA, 4th floor.</li><li>• Location of the Department of Pathology and Forensic Medicine: Shymkent, Al-Farabi square, 3, academic building No. 2 of SKMA, 4th floor, classrooms No. 404 a, b, No. 406, No. 408, No. 409, No. 411 a, b;</li><li>• e-mail: Patan.gisto@mail.ru</li><li>• Location of the Department of Pharmacology, Pharmacotherapy and Pharmacology Clinic: Shymkent, Al-Farabi Ave., 1, main educational building of SKMA, 4th floor, auditorium No. 419, No. 421, No. 425, No. 429, No. 431, No. 434, No. 417, lecture hall No. 4;</li><li>• tel. 40-82-06 (ATS), 227 (ext.).</li><li>• Location of the Department of Propaedeutics of Internal Diseases: Shymkent, ParkHealth Clinic, Kurmanbekov St., 2;</li><li>• tel.: 8 701 738 6114,</li><li>• e-mail: propedevtica_vb@mail.ru</li><li>• Location of the Department of Pediatrics-1: Shymkent, Argynbekov St., 125, Regional Children's Hospital;</li><li>• e-mail: ped.rez@ mail.ru</li><li>• Location of the Department of Phthisiopulmonology and Radiology: Shymkent, Ryskulova St., 82/16, Multidisciplinary Clinic "Tynyk"</li></ul> |                                                                                                                                                                                                                                                                            |            |      |      |     |
| 6.2 | Number of hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Lectures                                                                                                                                                                                                                                                                   | Practical. | Lab. | SROP | SRO |
|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 10                                                                                                                                                                                                                                                                         | 40         |      | 15   | 85  |
| 6.3 | Study plan for the discipline                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                            |            |      |      |     |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

| Days                                                          |          | 1 | 2 | 3 | 4 | 5 | 6          | 7 | 8 | 9 | 10 | 11 | 12         | Часы        |
|---------------------------------------------------------------|----------|---|---|---|---|---|------------|---|---|---|----|----|------------|-------------|
| Form of the lesson                                            |          |   |   |   |   |   |            |   |   |   |    |    |            |             |
| Radiation diagnostics<br>(1 cr.)<br>Propaedeutics of internal | Lek      | 1 |   |   |   |   | 1          |   |   |   |    |    |            | 2           |
|                                                               | Practice | 3 |   |   |   |   | 3          |   |   |   |    |    | 2          | 8           |
|                                                               | SROP     | 1 |   |   |   |   | 1<br>PK №1 |   |   |   |    |    | 1<br>PK №2 | 3           |
|                                                               | SRO      | 6 |   |   |   |   | 6          |   |   |   |    |    | 2          | 14+3(ПА)=17 |
| diseases<br>(1 cr.)<br>Pharmacology                           | Lek      |   | 1 |   |   |   |            |   | 1 |   |    |    |            | 2           |
|                                                               | Practice |   | 3 |   |   |   |            |   | 3 |   |    | 2  |            | 8           |
|                                                               | SROP     |   | 1 |   |   |   |            |   | 1 |   |    | 1  |            | 3           |
|                                                               | SRO      |   | 6 |   |   |   |            |   | 6 |   |    | 2  |            | 14+3(ПА)=17 |
| (1 cr.)<br>Pathophysiology<br>(0.5 cr.)                       | Lek      |   |   |   |   | 1 |            |   |   |   | 1  |    |            | 2           |
|                                                               | Practice |   |   |   |   | 3 |            |   |   |   | 3  |    | 2          | 8           |
|                                                               | SROP     |   |   |   |   | 1 |            |   |   |   | 1  |    | 1          | 3           |
|                                                               | SRO      |   |   |   |   | 6 |            |   |   |   | 6  |    | 2          | 14+3(ПА)=17 |
| Pathological anatomy<br>(0.5 cr.)                             | Lek      |   |   | 1 |   |   |            |   |   |   |    |    |            | 1           |
|                                                               | Practice |   |   | 2 |   |   |            |   |   | 2 |    |    |            | 4           |
|                                                               | SROP     |   |   |   |   |   |            |   |   | 1 |    |    |            | 1           |
|                                                               | SRO      |   |   |   |   |   |            |   |   | 8 |    |    |            | 8+1(ПА)=9   |
| Propaedeutics of childhood<br>diseases<br>(0.5 cr.)           | Lek      |   |   |   | 1 |   |            |   |   |   |    |    |            | 1           |
|                                                               | Practice |   |   |   | 2 |   |            |   |   |   |    | 2  |            | 4           |
|                                                               | SROP     |   |   |   |   |   |            |   |   |   |    | 1  |            | 1           |
|                                                               | SRO      |   |   |   |   |   |            |   |   |   |    | 7  |            | 7+2(ПА)=9   |
| Biochemistry<br>Radiation diagnostics<br>(1 cr.)              | Lek      |   |   |   |   |   |            |   | 1 |   |    |    |            | 1           |
|                                                               | Practice |   |   |   | 1 |   |            |   | 3 |   |    |    |            | 4           |
|                                                               | SROP     |   |   |   | 2 |   |            |   | 1 |   |    |    |            | 3           |
|                                                               | SRO      |   |   |   | 3 |   |            |   | 3 |   |    |    |            | 6+1(ПА)=7   |
|                                                               | Lek      |   |   |   |   |   |            |   |   | 1 |    |    |            | 1           |
|                                                               | Practice | 1 |   | 1 |   |   |            |   |   | 1 | 1  |    |            | 4           |
|                                                               | SROP     |   |   | 1 |   |   |            |   |   |   |    |    |            | 1           |
|                                                               | SRO      |   |   | 7 |   |   |            |   |   |   |    |    |            | 7+2(ПА)=9   |

| 7.                                     | Information about teachers |                      |                         |                                                                                               |                                      |
|----------------------------------------|----------------------------|----------------------|-------------------------|-----------------------------------------------------------------------------------------------|--------------------------------------|
| №                                      | Full name                  | Degrees and position | Email address           | Scientific interests, etc.                                                                    | Note                                 |
| Department of Biology and Biochemistry |                            |                      |                         |                                                                                               |                                      |
| 1                                      | Kenzhebekov P.K.           | PhD, Professor       | kenzhebekov.p@gmail.com | "Study of the chemical composition of volatile aroma-forming compounds in some meat products" | Author of 42 scientific publications |
| 2                                      | Ordabekova A.B             | Master of Biology,   | asmira75@mail.ru        | "Bauyrdyn uly zakymdanuyndagy selenin antioxidanttyk                                          | 1 teaching aid                       |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

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|                                               |                                 |                                                                                 |                           | kasiyeti"                                                                                                                                                    |                                                                                                                                                            |
| 3                                             | Asilbekova G.K.                 | Senior Lecturer                                                                 | shahats@mail.ru           | "Microelementoses"                                                                                                                                           | Author of 22 scientific publications                                                                                                                       |
| 4                                             | Kanzhigitova M.Zh.              | Master of Biology,                                                              | Molya_1503                | Study of legume and legume plants according to the law of homologous series                                                                                  | 1 teaching aid                                                                                                                                             |
| 5                                             | Zhienbaeva A.A.                 | Senior Lecturer                                                                 | alia.zhienbaeva@mail.ru   | -                                                                                                                                                            | Author of 14 scientific publications                                                                                                                       |
| 6                                             | Beisebaeva Lyazzat Mukhtarovna  | Master of Biology,                                                              | lyzzatb70@list.ru         | "Organization of clinical diagnostic laboratory service in modern conditions in the Republic of Kazakhstan"                                                  | 1 teaching aid                                                                                                                                             |
| Department of Pathology and Forensic Medicine |                                 |                                                                                 |                           |                                                                                                                                                              |                                                                                                                                                            |
| 1                                             | Sadykova Aliya Shamilevna       | Head of the Department of Pathology and Forensic Medicine, MD, Acting Professor | aliya.sadykova.66@mail.ru | Topic of the scientific direction "Pathology of the immune system, pathological anatomy of tumors"                                                           | Author of 84 scientific publications, 5 textbooks, 1 patent for invention, 1 monograph                                                                     |
| 2                                             | Bisimbaeva Saule Babatovna      | PhD, Acting Associate Professor                                                 | Bisimbaeva@inbox.ru       | Topic of the scientific direction "Prognostic assessment of the health of workers in cement production"                                                      | Author of 40 scientific publications, 2 provisional patents, 1 patent, 1 monograph and 2 acts of implementation of the results of scientific research work |
| 3                                             | Dosybaev Bakhytzhan Krykbaevich | PhD, Acting Associate Professor                                                 | Krik85@mail.ru            | Topic of the scientific direction "The influence of lead on the oxidative metabolism of lipids and proteins in the blood and its correction with biofenikol" | Author of 14 scientific publications                                                                                                                       |

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| <p style="text-align: center;">ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  | <p style="text-align: center;">SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p style="text-align: center;">Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.6 из 28                                                                                                                         |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                     |  |                                                                                                                                     |

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|----|---------------------------------------|---------------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4  | Kulbalieva<br>Zhannat<br>Zhakslikovna | PhD,<br>Acting Associate<br>Professor | zhann_7<br>@mail.ru       | Topic of the scientific<br>direction "Diagnostics<br>and prevention of<br>colorectal cancer"                                                   | Author of 44 scientific<br>publications, 1 teaching<br>aid, 2 acts of<br>implementation of the<br>results of scientific<br>research work and 3 acts<br>of implementation of the<br>results of teaching aid |
| 5  | Kerimov<br>Rasim<br>Azatovich         | Master, Senior<br>Lecturer            | Kir-2004<br>@list.ru      | Topic of the scientific<br>direction "The<br>development of<br>arterial diseases and<br>atherosclerosis<br>morphogenesis in<br>Shymkent"       | Author of 20 scientific<br>publications                                                                                                                                                                    |
| 6  | Abildina<br>Kalamkas<br>Berzhanovna   | Master, Assistant                     | Mskas1972<br>@mail.ru     | Topic of the scientific<br>direction "Pathology of<br>the immune system,<br>pathological anatomy<br>of tumors"                                 | Author of 19 scientific<br>publications 1 teaching<br>aid                                                                                                                                                  |
| 7  | Ignatieva<br>Anastasia<br>Sergeevna   | Senior Lecturer                       | Zhelonkina_88@<br>mail.ru | -                                                                                                                                              | -                                                                                                                                                                                                          |
| 8  | Berdalieva<br>Gulmira<br>Bakhytkyzy   | Senior Lecturer                       | Mira-3505<br>@mail.ru     | -                                                                                                                                              | Author of 6 scientific<br>publications                                                                                                                                                                     |
| 9  | Kurymbaeva<br>Ainur<br>Rashidkyzy     | Assistant                             | Smp_zoj<br>@mail.ru       | -                                                                                                                                              | -                                                                                                                                                                                                          |
| 10 | Seidakbar<br>Aisana<br>Usenovna       | Lecturer                              | aseydakbar<br>@mail.ru    | -                                                                                                                                              | Author of 2 scientific<br>publications                                                                                                                                                                     |
| 11 | Duysembieva<br>Zhazira<br>Mereykyzy   | Lecturer                              | zhazira0508<br>@mail.ru   | Theme of the scientific<br>direction "Ontustik<br>Kazakhstan<br>aymagyndagy<br>turgyndardyn salauatty<br>omir saltyn<br>kalyptastyrudyn gylymi | Author of 3 scientific<br>publications                                                                                                                                                                     |

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| <p>ONTÜSTİK QAZAQSTAN<br/>MEDISINA<br/>AKADEMIASY<br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                                    |  |  <p>SOUTH KAZAKHSTAN<br/>MEDICAL<br/>ACADEMY<br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.7 из 28                                                                                                                                                                       |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                   |

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| Department of Pharmacology, Pharmacotherapy and Clinical Pharmacology |                                    |                                                   |                            |                                                                                                                                                                                                                                                                                               |                                                                                                  |
| 1                                                                     | Ibragimova<br>Aigul<br>Gaffarovna  | PhD, Acting<br>Associate Professor                | aygul_ibr<br>@mail.ru      | "Problems of rational<br>use of drugs: effective<br>and safe<br>pharmacotherapy,<br>pharmacoepidemiologi<br>cal,<br>pharmacoeconomic,<br>pharmacogenetic<br>aspects. Personalized<br>therapy. Development<br>of herbal medicines<br>and effective herbal<br>medicine for various<br>diseases" | Author of more than 20<br>scientific papers, teaching<br>aids, methodological<br>recommendations |
| 2                                                                     | Abuova<br>Gulnara<br>Turganbaevna  | PhD, Acting<br>Associate Professor                | abuova@mail.ru             | "Pharmacoeconomic<br>approaches to<br>optimizing the<br>treatment of acute<br>respiratory infections<br>in outpatient settings"                                                                                                                                                               | Author of more than 20<br>scientific papers, teaching<br>aids, methodological<br>recommendations |
| 3                                                                     | Korganbaeva<br>Zaure<br>Sarybaevna | PhD, Acting<br>Associate Professor                | korganbaeva055<br>@mail.ru | "Korgasynmen<br>uyttanau kezinde kan<br>zhane bauyrdan<br>zakymdanuyna<br>phytopreparation<br>tardyn protektorlyk<br>aserin negizdeu"                                                                                                                                                         | Author of more than 20<br>scientific papers, teaching<br>aids, methodological<br>recommendations |
| 4                                                                     | Syrmanova<br>Nurgul<br>Rakhmanovna | Master of Medical<br>Sciences, Senior<br>Lecturer | n_rakchman<br>@mail.ru     | "Taspa tuysy<br>asimdikterinen bolinip<br>alyngan extracttardyn<br>specificalyk<br>belsendylykterin<br>zertteu"                                                                                                                                                                               | Author of more than 20<br>scientific papers, teaching<br>aids, methodological<br>recommendations |
| 5                                                                     | Muyutova<br>Makhsuda<br>Nasyrovna  | Master of Medical<br>Sciences, Senior<br>Lecturer | mahsu_med<br>@mail.ru      | Clinical pharmacology<br>in general medicine<br>and neurology                                                                                                                                                                                                                                 | Author of 3 scientific<br>articles                                                               |

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| <p>ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  |  <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.8 из 28                                                                                                                                                                              |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

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|--------------------------------------------------|----------------------------------------|-----------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6                                                | Sultanbekova<br>Aidana<br>Nasirllaqyzy | Lecturer                                | arnur.ernur89@<br>mail.ru | Clinical pharmacology<br>in general medicine<br>and pediatrics                                                                                                                                                | Author of 3 scientific<br>articles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Department of Propaedeutics of Internal Diseases |                                        |                                         |                           |                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 1                                                | Bekmurzaeva<br>Elmira<br>Kuanyshevna   | Head of<br>Department, MD,<br>Professor | Elmira-bek<br>@mail.ru    | Scientific work:<br>"Clinical and hygienic<br>features of the<br>formation of diseases<br>of the digestive organs<br>in workers of a modern<br>oil refining production<br>(on the example of JSC<br>"SHNOS")" | The author of over 260<br>scientific and<br>methodological<br>publications, 2 textbooks,<br>8 teaching aids.<br>Certificate of therapist,<br>gastroenterologist and<br>rheumatologist of the<br>highest category. 2005 -<br>Doctor of Medical<br>Sciences, approved by the<br>Higher Attestation<br>Commission of the<br>Republic of Kazakhstan<br>(diploma FK No.<br>0000379), (14.00.50 -<br>"Occupational<br>Medicine"), professor in<br>the specialty "Medicine"<br>(diploma PR No.<br>0000446), Higher<br>Attestation Commission<br>of the Republic of<br>Kazakhstan. Under the<br>supervision of<br>Bekmurzaeva E.K. 3<br>candidates of medical<br>sciences were prepared,<br>who received approval<br>from the Committee for<br>Control and Certification<br>in the Sphere of<br>Education and Science of<br>the Ministry of Education<br>and Science of the<br>Republic of Kazakhstan.<br>She was awarded medals,<br>diplomas and certificates<br>for high scientific |

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| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  | <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.9 из 28                                                                                             |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

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|   |                                  |                                                           |                      |                                                                                    | achievements: Robert Koch 2012, Peterkoff 2014, Albert Schweitzer 2015, "Excellent Healthcare Worker of the Republic of Kazakhstan", Republican grant of the Ministry of Education and Science of the Republic of Kazakhstan "Best University Teacher - 2014" |
| 2 | Sadykova Gulzhan Saparovna       | Candidate of Medical Sciences, Acting Associate Professor | gulzhan2171@mail.ru  | Scientific work: "Uly hepatitis kozyndegi pannuvladinnin gepatoprotektorlyk aseri" | Author of more than 35 scientific and scientific-methodical publications, 8 teaching aids, Certificate of a therapist of the highest category. Certificate of a specialist in general practice                                                                |
| 3 | BaydullaevBak hram Muzaffarovich | Assistant                                                 | bbm2055@mail.ru      | -                                                                                  | Author of more than 65 scientific and scientific-methodical publications, 6 teaching aids. Certificate of a therapist of the highest category                                                                                                                 |
| 4 | AkhaevaLaura Zhaksylykovna       | Assistant                                                 | Laura1990a00@mail.ru | -                                                                                  | Certificate of a specialist in general practice. Author of 25 scientific publications                                                                                                                                                                         |
| 5 | Toktarova Gulnaz Abdimalikovna   | Assistant                                                 | Toktar_8585@mail.ru  | -                                                                                  | Certificate of a specialist in general practice, functional diagnostics, cardiologist. Author of 8 scientific publications and co-author of 1 teaching aid                                                                                                    |
| 6 | Batkhieva Madina Bekenovna       | Assistant                                                 | Madin_madina@mail.ru | -                                                                                  | Co-author of 1 teaching aid. International APTIS certificate. Certificate of a                                                                                                                                                                                |

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| <p>ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  |  <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.10 из 28                                                                                                                                                                             |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

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|                                                 |                                    |                             |                                                |                                    | therapist                                                                  |                               |                           |
| 7                                               | Tazhibaeva Azhar Bakytbekkyzy      | Assistant                   | avril.tab@mail.ru                              | -                                  | Certificate of a general practitioner Author of 29 scientific publications |                               |                           |
|                                                 |                                    |                             |                                                |                                    |                                                                            |                               |                           |
| Department of Pediatrics-1                      |                                    |                             |                                                |                                    |                                                                            |                               |                           |
| 1                                               | Kemelbekov K.S.                    | PhD                         | Kanat-270184@mail.ru                           | Pediatrics,                        | Author of more than 80 scientific publications and 3 textbooks             |                               |                           |
| 2                                               | Baimakhanov a B.B.                 | PhD, Associate Professor    | Bakhtigul059@mail.ru                           | Balalar surgery                    | Author of more than 40 scientific publications and 1 manual                |                               |                           |
| 3                                               | Absadyk A.E.                       | Assistant                   | aidana.absadyk@mail.ru                         | Pediatrics                         | Author of scientific publications -                                        |                               |                           |
| 4                                               | Baltabaeva B.S.                    | Assistant                   | Boti.asik@mail.ru                              | Pediatrics                         | Author of scientific publications -                                        |                               |                           |
| Department of Phthisiopulmonology and Radiology |                                    |                             |                                                |                                    |                                                                            |                               |                           |
| 1                                               | Tulegenova Aigul Asanbaevna        | assistant of the department | taa8009@mail.ru                                | Ultrasound of organs in children   | Gives lectures and conducts classes in Kazakh and Russian.articles         |                               |                           |
| 2                                               | Nazarbaeva Gulzhanat Nalikhhanovna | assistant of the department | visual_diagnostics@mail.ru                     | Ultrasound of the urinary system   | radiation diagnostics doctor. More than 8 scientific articles              |                               |                           |
| 3                                               | Umiraliyev Aset Amiralievich       | assistant of the department | Aset.umiraliyev.72@mail.ru                     | Ultrasound of the abdominal cavity | radiation diagnostics doctor. More than 8 scientific articles              |                               |                           |
| 4                                               | Amangeldi Zhibek Nurtaskyzy        | assistant of the department | <a href="mailto:Azhn@mail.ru">Azhn@mail.ru</a> | Neuroradiology                     | radiation diagnostics doctor. Author of 1 textbook                         |                               |                           |
| 8.                                              | Thematic plan                      |                             |                                                |                                    |                                                                            |                               |                           |
| Day                                             | Topic Title                        |                             | Summary                                        | PO module                          | Number                                                                     | Forms/methods/technologies of | Forms/methods of assessme |

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| <p>ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  | <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.11 из 28                                                                                            |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

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| 1 | Radiation diagnostics. Lecture 1<br>Radiation diagnostics of diseases of the musculoskeletal system.<br>Methods of radiation examination. | Basic visual methods of examination of the musculoskeletal system.<br>Types of radiation methods of examination of the musculoskeletal system.<br>Features of the musculoskeletal system.                                                                                                                                                     | PO1<br>PO2<br>PO3 | 1               | Overview lecture                                                                         | Blitz survey<br>Feedback |
|   | Radiation diagnostics. Practical lesson 1 Radiation anatomy of the musculoskeletal system in pathology.                                   | Visual anatomy of the musculoskeletal system.<br>Types of radiation methods of examination of the musculoskeletal system.<br>Features of the musculoskeletal system.                                                                                                                                                                          | PO1<br>PO2<br>PO3 | 3               | oral survey, description of images, solution of test tasks                               | Checklist                |
|   | Radiation diagnostics. SROP/SRO 1<br>Radiation diagnostics of the main pathologies of the musculoskeletal system                          | Methods of examination of the musculoskeletal system.<br>Basic and additional methods of examination.<br>Radiography of the musculoskeletal system.<br>Electroradiography of the musculoskeletal system.<br>Linear tomography of the musculoskeletal system.<br>Computer tomography.<br>Magnetic resonance imaging. Radionuclide diagnostics. | PO1<br>PO2<br>PO3 | 1/6             | Testing on the topic.<br>Oral defense of the notes (based on the teacher's questions).). | Checklist                |
|   | Biochemistry. Practice No. 1.<br>Study of the biochemical basis of muscle contraction.                                                    | Study of the biochemical basis of muscle contraction.<br>Experiments with modeling the work of actin and myosin. Analysis of the role of calcium in muscle contraction.                                                                                                                                                                       | PO1<br>PO3        | 1               | seminar, testing, situational tasks                                                      | Checklist                |
| 2 | Propaedeutics of internal diseases.                                                                                                       | Complaints, questioning,                                                                                                                                                                                                                                                                                                                      | PO2               | 1               | Overview lecture                                                                         | Quick Poll<br>Feedback   |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

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| Lecture 1<br>Methods of examination of patients with pathology of the musculoskeletal system.<br>Diagnostic value                                                                             | general examination of patients with diseases of the musculoskeletal system. Methodology and technique of examination of the musculoskeletal system. Physical examination of patients with diseases of the musculoskeletal system: inspection, palpation of small and large joints. The main symptoms of diseases of the musculoskeletal system, their diagnostic value.                          |                   |     |                                                                                                                          |                                                                        |
| <b>Propaedeutics of internal diseases.</b><br><b>Practical lesson 1</b><br><b>Methods of examination of patients with pathology of the musculoskeletal system.</b><br><b>Diagnostic value</b> | Complaints, questioning, general examination of patients with diseases of the musculoskeletal system. Methodology and technique of examination of the musculoskeletal system. Physical examination of patients with diseases of the musculoskeletal system: inspection, palpation of small and large joints. The main symptoms of diseases of the musculoskeletal system, their diagnostic value. | PO2<br>PO3<br>PO4 | 3   | Discussion of the topic of the practical lesson, solving situational problems, learning and performing practical skills. | Checklist for oral questioning, assessment of practical skills k-list. |
| <b>Propaedeutics of internal diseases.</b><br><b>SROP/SRO 1</b><br><b>Methods of examination of patients with pathology of the musculoskeletal system.</b><br><b>Diagnostic value</b>         | Complaints, questioning, general examination of patients with diseases of the musculoskeletal system. Methodology and technique of examination of the musculoskeletal system. Physical examination of patients with diseases of the musculoskeletal system: inspection, palpation of small and large joints. The                                                                                  | PO2<br>PO3        | 1/6 | Defense of the presentation and practical skills                                                                         | Checklist for assessment of presentation and practical skillslist      |

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| <p>ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  | <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.13 из 28                                                                                            |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

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|   |                                                                                          | main symptoms of diseases of the musculoskeletal system, their diagnostic value.                                                                                                                                                                                                                                                |            |     |                                                           |                       |
| 3 | <b>Pathological physiology.<br/>Lecture 1<br/>Osteopathy</b>                             | Typical forms of musculoskeletal pathology. Osteopathy, concept, types, etiopathogenesis. Dysregulation of osteogenic cell activity. Osteoporosis and osteomalacia, concept, causes, mechanisms of development, manifestations. Hereditary osteopathies. Rickets, etiology, pathogenesis, manifestations. Clinical significance | PO1        | 1   | Overview lecture                                          | Blitz survey Feedback |
|   | <b>Pathological physiology.<br/>Practical lesson 1<br/>Osteopathy</b>                    | Typical forms of musculoskeletal pathology. Osteopathy, concept, types, etiopathogenesis. Dysregulation of osteogenic cell activity. Osteoporosis and osteomalacia, concept, causes, mechanisms of development, manifestations. Hereditary osteopathies. Rickets, etiology, pathogenesis, manifestations. Clinical significance | PO3<br>PO5 | 2   | Work in small groups,                                     | Checklist             |
|   | <b>Biochemistry.<br/>Practical lesson 2 Study of energy metabolism in muscle tissue.</b> | Study of energy metabolism in muscle tissue. Calculation of the rate of ATP resynthesis under different conditions. Comparison of anaerobic and aerobic glycolysis.                                                                                                                                                             | PO3<br>PO5 | 2   | Work in small groups, discussion of the topic, case-study | Checklist             |
|   | <b>Biochemistry.<br/>SROP/SRO 1 "Biochemical</b>                                         | "Biochemical bases of work and pathologies of the                                                                                                                                                                                                                                                                               | PO3<br>PO5 | 1/7 | presentation, glossary,                                   |                       |

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| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  |  <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.14 из 28                                                                                                                                                                             |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

|   | <b>bases of work and pathologies of the musculoskeletal system"</b>                                                          | musculoskeletal system"                                                                                                                                                                                                                                       |                   |     | essay, analysis of scientific articles                                                             |                                                                                    |
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| 4 | <b>Pathological anatomy. Lecture 1 Diseases of the musculoskeletal system</b>                                                | Bone diseases. Tumors and inflammatory diseases of bones and joints. Osteomyelitis. Tuberculosis. Clinical significance                                                                                                                                       | PO1               | 1   | Review lecture                                                                                     | Blitz survey Feedback                                                              |
|   | <b>Pathological anatomy. Practical lesson 1 Diseases of the musculoskeletal system</b>                                       | Bone diseases. Rickets. Tumors. Benign and malignant tumors: fibroma, fibrosarcoma, osteoma, osteosarcoma. Acute and chronic osteomyelitis. Tuberculosis. Etiology, pathogenesis, pathological anatomy, complications, causes of death. Clinical significance | PO3<br>PO5        | 1   | Discussion of the topic, description of macro- and micropreparations with a conclusion, case-study | Checklist description of macro- and micropreparation, checklist for solving a case |
|   | <b>Propaedeutics of childhood diseases. Practical lesson 1 Clinical syndromes of the musculoskeletal system in children.</b> | Rickets, symptoms, causes of rickets in children. Osteomalacia, bone deformities in rickets. Rickets-like syndrome.                                                                                                                                           | PO2<br>PO3<br>PO4 | 1   | Discussion of the topic of the practical lesson, solving situational problems                      | Checklist                                                                          |
|   | <b>Propaedeutics of childhood diseases. SROP/SRO 1 Symptoms of osteomalacia in rickets.</b>                                  | Rickets, symptoms, causes of rickets in children. Osteomalacia, bone deformities in rickets. Rickets-like syndrome.                                                                                                                                           | PO2<br>PO3        | 2/3 | Presentation defense                                                                               | Presentation Evaluation                                                            |
| 5 | <b>Pharmacology. Lecture 1 Medicines used for diseases of the musculoskeletal system</b>                                     | Drugs used in osteoarthritis. Drugs affecting the formation of the skeleton and regulating calcium-phosphorus metabolism. Basic drugs used in rheumatoid arthritis. Classification, mechanism of action, indications,                                         | PO1               | 1   | Overview lecture                                                                                   | Checklist                                                                          |

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| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  | <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра профилактики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.15 из 28                                                                                            |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

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|   |                                                                                                                                                                      | contraindications, side effects. Peculiarities of use in the age aspect.                                                                                                                                                                                                                                                    |                                 |     |                                                                                                                         |                                                                               |
|   | <b>Pharmacology.<br/>Practical lesson 1<br/>Medicines used for diseases of the musculoskeletal system</b>                                                            | Drugs used in osteoarthritis. Drugs affecting the formation of the skeleton and regulating calcium-phosphorus metabolism. Basic drugs used in rheumatoid arthritis. Classification, mechanism of action, indications, contraindications, side effects. Peculiarities of use in the age aspect.                              | PO6                             | 3   | Discussion of the topic of the practical lesson, solving situational problems, learning and performing practical skills | Checklist for oral questioning, assessment of practical skills.<br><br>k-list |
|   | <b>Pharmacology.<br/>SROP/SRO 1<br/>Medicines used for rheumatoid arthritis.</b>                                                                                     | Drugs used in rheumatoid arthritis. Classification, mechanism of action, indications, contraindications, side effects. Peculiarities of use in the age aspect.                                                                                                                                                              | PO6<br>PO7                      | 1/6 | presentation, glossary, essay, analysis of scientific articles                                                          | Checklist for assessment of presentation and practical skillslist             |
| 6 | Radiation diagnostics. Lecture 2<br>Age-related radiation anatomy of the musculoskeletal system.<br>Radiation diagnostics of traumatic injuries to bones and joints. | Methods of examination of the musculoskeletal system. Basic and additional methods of examination. Radiography of the musculoskeletal system. Electroradiography of the musculoskeletal system. Linear tomography of the musculoskeletal system. Computer tomography. Magnetic resonance imaging. Radionuclide diagnostics. | PO1<br>PO2<br>PO3<br>PO4<br>PO5 | 1   | Overview lecture                                                                                                        | Blitz survey<br>Feedback                                                      |
|   | Radiation diagnostics.Practical lesson 2<br>Main pathological processes in                                                                                           | Visual diagnostics of the musculoskeletal system. Types of radiation methods for examining the                                                                                                                                                                                                                              | PO1<br>PO2<br>PO3               | 3   | Oral survey, description of pictures, solution of                                                                       | Checklist                                                                     |

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| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  | <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.16 из 28                                                                                            |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

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|   | bones and their radiation diagnostics.                                                                                                                                                                                                 | musculoskeletal system.<br>Features of the musculoskeletal system.                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |     | test tasks of control educational cases                                       |                     |
|   | Radiation diagnostics.<br>SROP/SRO 2<br>Boundary control No. 1<br>Radiation diagnostics of traumatic injuries to the musculoskeletal system.                                                                                           | Topics of lectures, practical classes, independent work, covered during 1-6 days of training Radiography of the musculoskeletal system.<br>Magnetic resonance imaging, computer tomography physical and technical principles, principles of operation                                                                                                                                                                                                                                    | PO1<br>PO2<br>PO3<br>PO4<br>PO5<br>PO6 | 1/4 | Presentatio<br>n defense.                                                     | Checklist           |
| 7 | <b>Propaedeutics of childhood diseases.<br/>Lecture 1<br/>Features of the structure of the skin and its appendages in children. Methodology of skin examination. Semiotics of skin lesions.</b>                                        | Clinical picture of primary and secondary morphological elements of the skin in children of different age groups.                                                                                                                                                                                                                                                                                                                                                                        | PO2                                    | 1   | Overview lecture                                                              | Blitz Poll Feedback |
|   | <b>Propaedeutics of childhood diseases.<br/>Practical lesson 2<br/>Methodology of skin and subcutaneous fat tissue examination. Semiotics of skin lesions, subcutaneous fat tissue, appendages in children of different age groups</b> | Principles of questioning, collecting anamnesis and objective method of examining sick children of different age groups with pathologies of the skin and their appendages.<br>Evaluation of the degree of development, distribution, consistency of fat, soft tissue turgor, presence of edema, emphysema.<br>Insufficient, excessive fat deposition, lipomatosis, lipodystrophy, compaction.<br>Dystrophic, infectious and allergic changes in the skin, features of rashes in children | PO2<br>PO3<br>PO4                      | 3   | Discussion of the topic of the practical lesson, solving situational problems | Checklist           |
|   | <b>Propaedeutics of childhood</b>                                                                                                                                                                                                      | Concept, types, causes,                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PO2                                    | 1/3 | Presentatio                                                                   | Presentati          |

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| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  |  <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.17 из 28                                                                                                                                                                             |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

|                                                                                  | diseases.<br><b>SROP/SRO 2<br/>Hypomelanosis and<br/>hypermelanosis in children.<br/>Vascular formations of the skin.</b>                                 | mechanisms of<br>development, clinical<br>picture                                                                                                                                                                                                                   | PO3               |     | n defense                                                                     | on<br>Evaluatio<br>n<br>Checklist               |
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| 8                                                                                | <b>Propaedeutics of internal diseases.<br/>Lecture 2<br/>Leading clinical syndromes in rheumatology (arthritis and arthrosis). Diagnostic value.</b>      | Principles of questioning, collecting complaints, anamnesis and objective method of examining patients with leading clinical syndromes (arthritis and arthrosis) of the musculoskeletal system.                                                                     | PO2               | 1   | Overview lecture                                                              | Blitz Poll Feedback                             |
|                                                                                  | <b>Propaedeutics of internal diseases.<br/>Practical lesson 2 Leading clinical syndromes in rheumatology (arthritis and arthrosis). Diagnostic value.</b> | Principles of questioning, collecting complaints, anamnesis and objective method of examining patients with leading clinical syndromes (arthritis and arthrosis) of the musculoskeletal system                                                                      | PO2<br>PO3<br>PO4 | 3   | Discussion of the topic of the practical lesson, solving situational problems | Checklist                                       |
|                                                                                  | <b>Propaedeutics of internal diseases.<br/>SROP/SRO 2<br/>Leading clinical syndromes in rheumatology (arthritis and arthrosis). Diagnostic value.</b>     | Principles of questioning, collecting complaints, anamnesis and objective method of examining patients with leading clinical syndromes (arthritis and arthrosis) of the musculoskeletal system                                                                      | PO2<br>PO3        | 1/6 | Presentatio<br>n defense                                                      | Presentati<br>on<br>Evaluatio<br>n<br>Checklist |
| Chec<br>klis<br>t<br>Chec<br>klis<br>t<br>Feed<br>bac<br>k<br>Chec<br>klis<br>t9 | <b>Pathological physiology.<br/>Practical lesson 2<br/>Arthropathies</b>                                                                                  | Arthropathies, concept, types. Age-related joint involution. Arthritis and arthrosis, concept, types, causes, development mechanisms. Joint syndrome, manifestations. Rheumatoid arthritis, concept, etiology, pathogenesis, manifestations. Clinical significance. | PO3<br>PO5        | 2   | Work in small groups, discussion of the topic case-study,                     | Checklist                                       |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

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|    | <b>Pathological physiology.</b><br><b>SROP/SRO 1</b><br><b>Typical forms of skin pathology</b>                                          | Typical forms of skin pathology. Dermatoses and dermatitis, concept, types, etiopathogenesis, manifestations. Skin resistance to damage. Pigmentation disorders, causes, development mechanisms, manifestations. Hereditary forms of skin pathology. Clinical significance | PO3<br>PO5 | 1/8 | Case-study                                                                              | Checklist |
|    | <b>Biochemistry.</b><br><b>Lecture 1. Biochemistry of the musculoskeletal system.</b><br><b>Biochemistry of muscle and bone tissue.</b> | Biochemistry of the musculoskeletal system. Biochemistry of muscle and bone tissue.                                                                                                                                                                                        | PO3<br>PO5 | 1   | Case-study review lecture                                                               | Feedback  |
|    | <b>Biochemistry. Practical lesson 3.</b><br><b>Biochemical analysis of bone tissue.</b>                                                 | Biochemical analysis of bone tissue. Determination of the composition of the organic matrix and mineral components. Study of the role of vitamin D and its deficiency.                                                                                                     | PO3<br>PO5 | 1   | seminar, testing, situational tasks                                                     | Checklist |
| 10 | <b>Pharmacology.</b><br><b>Lecture 2</b><br><b>Anti-inflammatory drugs.</b><br><b>Glucocorticoids.</b>                                  | Nonsteroidal anti-inflammatory drugs. Glucocorticoids. Classification, mechanism of action, indications, contraindications, side effects. Age-related features of use.                                                                                                     | PO6        | 1   | Overview lecture                                                                        | feedback  |
|    | <b>Pharmacology.</b><br><b>Practical lesson 2</b><br><b>Anti-inflammatory drugs.</b><br><b>Glucocorticoids.</b>                         | Nonsteroidal anti-inflammatory drugs. Glucocorticoids. Classification, mechanism of action, indications, contraindications, side effects. Age-related features of use.                                                                                                     | PO6        | 3   | Discussion of the topic of the practical lesson, solving situational problems, learning | Checklist |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

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|    | <b>Pharmacology. SROP/SRO 2<br/>Drugs used in diseases of the musculoskeletal system</b>                                                                                                                           | Drugs used for osteoarthritis. Drugs that affect skeletal formation and regulate calcium-phosphorus metabolism. Vitamins (vitamin D preparations). Classification, mechanism of action, indications, contraindications, side effects. Age-related features of use.                                           | PO6<br>PO7        | 1/6                             | presentation, glossary, essay, analysis of scientific articles<br><br>Presentation evaluation checklist |
|    | <b>Biochemistry. Practical lesson No. 4. Diagnostics and interpretation of biochemical markers of pathologies.</b>                                                                                                 | Diagnostics and interpretation of biochemical markers of pathologies. Analysis of osteoporosis and osteomalacia indicators. Study of biochemical changes in myopathies.                                                                                                                                      | PO3<br>PO5        | 1                               | seminar, situational tasks, testing<br><br>checklist                                                    |
| 11 | <b>Propaedeutics of internal diseases. Practical lesson 3<br/>Methods of examining patients with pathology of the musculoskeletal system: laboratory and instrumental methods of examination. Diagnostic value</b> | Methods of examination of patients with pathology of the musculoskeletal system: laboratory (determination of Rheumatoid factor, Antistreptolysin-O, ESR, CBC with leukocyte formula, C-reactive protein, etc.) and instrumental (X-ray examination, MRI, CT, etc.) methods of examination. Diagnostic value | PO2<br>PO3<br>PO4 | 2                               | Discussion of the topic of the practical lesson, solving situational problems<br><br>Checklist          |
|    | <b>Propaedeutics of internal diseases. SROP/SRO 3<br/>Methods of examining patients with pathology of the musculoskeletal system:</b>                                                                              | Methods of examination of patients with pathology of the musculoskeletal system: laboratory (determination of Rheumatoid factor,                                                                                                                                                                             | PO2<br>PO3        | 1/2                             | Presentation defense<br><br>Presentation Evaluation Checklist                                           |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

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|    | <b>laboratory and instrumental methods of examination. Diagnostic value</b> | Antistreptolysin-O, ESR, CBC with leukocyte formula, C-reactive protein, etc.) and instrumental (X-ray examination, MRI, CT, etc.) methods of examination. Diagnostic value                                                                                                                                                                            |            |     |                                                                                                                          |              |
|    | <b>Pathological anatomy. Practical lesson 2 Skin diseases</b>               | Pigmentation disorders. Inflammatory dermatoses. Tumors: skin papilloma, basal cell carcinoma, squamous cell carcinoma, nevus, melanoma, tumors of the skin appendages, capillary hemangioma, leprosy granuloma. Etiology, pathogenesis, pathological anatomy, complications, causes of death. Congenital disorders: Ichthyosis. Clinical significance | PO3<br>PO5 | 2   | Discussion of the topic, description of macro- and micropreparations with a conclusion,                                  | Checklist    |
|    | <b>Pathological anatomy. SROP/SRO 1 Rheumatoid arthritis.</b>               | Rheumatoid arthritis. Etiology, pathogenesis, pathological anatomy, complications, causes of death. Clinical significance                                                                                                                                                                                                                              | PO3<br>PO5 | 1/7 | Case-study                                                                                                               | Checklist    |
| 12 | <b>Pharmacology. Practical lesson 3 Anabolic steroids.</b>                  | Anabolic steroids. Mechanism of action, indications, contraindications, side effects. Peculiarities of use in the age aspect.                                                                                                                                                                                                                          | PO6        | 2   | Discussion of the topic of the practical lesson, solving situational problems, mastering and performing practical skills | Checklist    |
|    | <b>Pharmacology. SROP/SRO 3</b>                                             | Central muscle relaxants (mydocalm, baclofen).                                                                                                                                                                                                                                                                                                         | PO6<br>PO7 | 1/2 | presentation, glossary,                                                                                                  | Presentation |

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| <p>ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  |  <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.21 из 28                                                                                                                                                                             |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                          |

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|     | <b>Medicines used for gout.<br/>Medicines used for muscle spasms.</b>                                                                              | Myotropic antispasmodics (drotaverine hydrochloride, papaverine hydrochloride). M-anticholinergics (atropine sulfate, platifillin hydrotartrate). Mechanism of action, indications, contraindications, side effects. Peculiarities of use in the age aspect. |                                        |     | essay,<br>analysis of<br>scientific<br>articles                                            | Evaluation<br>Checklist |
|     | <b>Radiological diagnostics.<br/>Practical lesson 3<br/>Radiological diagnostics in arthropathy: approaches, methods and main changes.</b>         | Radiography of the musculoskeletal system. Magnetic resonance imaging, computed tomography physical and technical principles, principles of operation                                                                                                        | PO1<br>PO2<br>PO3                      | 2   | Work in small groups, discussion of the topic, case-study                                  | Checklist               |
|     | <b>Radiological diagnostics.<br/>SROP/SRO 3<br/>Boundary control No. 2<br/>Radiological diagnostics of diseases of the musculoskeletal system.</b> | Topics of lectures, practical classes, independent work, covered during the 7-12th day of training                                                                                                                                                           | PO1<br>PO2<br>PO3<br>PO4<br>PO5<br>PO6 | 1/2 | Integrated monitoring of educational achievements using control educational cases, testing | Checklist               |
| 8.1 | Midterm assessment                                                                                                                                 |                                                                                                                                                                                                                                                              |                                        |     |                                                                                            | 15 hours                |
| 9.  | Teaching methods                                                                                                                                   |                                                                                                                                                                                                                                                              |                                        |     |                                                                                            |                         |
| 9.1 | Lectures Review                                                                                                                                    | lectures                                                                                                                                                                                                                                                     |                                        |     |                                                                                            |                         |
| 9.2 | Practical classes                                                                                                                                  | Work in small groups, discussion of the topic, case study, description of macro- and micropreparations with a conclusion Discussion of the topic of the practical lesson, solving situational problems, mastering and performing practical skills.           |                                        |     |                                                                                            |                         |
| 9.3 | SROP/SRO                                                                                                                                           | Case study, analysis of scientific articles, project implementation                                                                                                                                                                                          |                                        |     |                                                                                            |                         |
| 9.4 | Border control                                                                                                                                     | Defense of the presentation and practical skills. Integrated monitoring of educational achievements using control educational cases, testing                                                                                                                 |                                        |     |                                                                                            |                         |

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| <p>ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |                                                                                                                                                                                          |

| 10. Assessment criteria                                   |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                   |
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| 10.1 Criteria for assessing the results of the discipline |                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                   |
| №<br>PO                                                   | Name of learning outcomes                                                                                                                                                                                                                                                                                                    | Unsatisfactory                                                                                                                                                                                                                                   | Satisfactory                                                                                                                                                                                                                                                                                                                        | Good                                                                                                                                                                                                                                                               | Excellent                                                                                                                                                                                                                                         |
| PO 1                                                      | Demonstrates knowledge and understanding of the basics of semiotics and syndromology, etiology, pathogenesis and morphogenesis of pathology of the musculoskeletal system and skin                                                                                                                                           | 1. Does not have a basic understanding of semiotics and syndromology, does not identify symptoms and syndromes.<br>2. Cannot explain the etiology, pathogenesis and morphogenesis of pathological changes in the musculoskeletal system and skin | 1. Does not have a basic understanding of semiotics and syndromology, makes gross errors when defining symptoms and syndromes in pathologies of the musculoskeletal system and skin.<br>2. Makes errors when explaining the etiology, pathogenesis and morphogenesis of pathological changes in the musculoskeletal system and skin | 1. Has a basic understanding of semiotics and syndromology, identifies symptoms and syndromes.<br>2. Explains the etiology, pathogenesis and morphogenesis of pathological changes in the musculoskeletal system and skin, but makes some fundamental inaccuracies | 1. Fluently knows the basics of semiotics and syndromology, independently identifies symptoms and syndromes.<br>2. Fluently explains the etiology, pathogenesis and morphogenesis of pathological changes in the musculoskeletal system and skin. |
| PO 2                                                      | Proficient in methods of conducting questioning, physical examination of adults and children, uses clinical thinking in collecting information when drawing up an examination plan; outlines the scope of basic and additional studies to clarify the syndrome of damage in pathology of the musculoskeletal system and skin | Has knowledge of methods for interviewing patients, conducting physical examinations, uses clinical thinking when collecting information when drawing up a research plan;                                                                        | Does not have a knowledge of interrogation methods, physical examination of the patient, does not use clinical thinking when collecting information when drawing up a                                                                                                                                                               | Has a good understanding of interrogation methods, physical examination of a patient, uses clinical thinking when collecting                                                                                                                                       | Has knowledge of interrogation methods, physical examination of children, uses clinical thinking when collecting information when drawing up a research plan; establishes the                                                                     |

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| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> | Стр.23 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |              |

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|      |                                                                                                                                                                                                                                                                                 | establishes the scope of basic and additional studies to clarify the syndrome of damage in pathology of the musculoskeletal system and skin                   | research plan; does not specify the syndrome of damage in pathologies of the musculoskeletal system and skin                                                                                                                                                                                                                         | information when drawing up a research plan; establishes the scope of basic research and makes mistakes to clarify the syndrome of damage in pathology of the musculoskeletal system and skin                                                                              | scope of basic and additional studies to clarify the syndrome of damage in pathologies of the musculoskeletal system and skin                                                                                                                                                       |
| PO 3 | Uses clinical thinking in collecting information when interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathology of the musculoskeletal system and skin, formulates a syndromic diagnosis, fills out a medical history | Does not know the results of morphological, laboratory and instrumental methods of examining patients with pathologies of the musculoskeletal system and skin | When interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathologies of the musculoskeletal system and skin, they do not think clinically about collecting information, incorrectly formulate a syndromic diagnosis, and make many mistakes in filling out the medical history | When interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathologies of the musculoskeletal system and skin, has some difficulty in clinical thinking when collecting information, formulates a syndromic diagnosis, | Uses clinical thinking when collecting information when interpreting the results of morphological, laboratory and instrumental methods of examining patients with pathologies of the musculoskeletal system and skin, formulates a syndromic diagnosis, fills out a medical history |

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| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.24 из 28                                                                                                                                                                      |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                   |

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|      |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                        | incorrectly fills out the medical history                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                        |
| PO 4 | Communicates information, ideas, problems and solutions to patients and their family members, knows the norms of ethics and deontology in communicating with patients, their relatives and colleagues | Does not know how to apply knowledge of the musculoskeletal system and skin in a clinical context, has not acquired the skills of collecting a clinical anamnesis and physical examination of patients with diseases of the musculoskeletal system and skin to provide first aid, is not able to interpret the results of laboratory and instrumental studies | Does not fully know how to apply knowledge about pathologies of the musculoskeletal system and skin in a clinical context, makes mistakes when collecting a clinical history and physical examination of patients with diseases of the musculoskeletal system and skin to provide first aid, and is poorly oriented in interpreting the results of laboratory and instrumental studies | Lists information on pathologies of the musculoskeletal system and skin in a clinical context, collects a clinical history and physical examination of patients with diseases of the pathologies of the musculoskeletal system and skin with the provision of first aid, is well versed in interpreting the results of laboratory and instrumental studies | Freely demonstrates knowledge of pathologies of the musculoskeletal system and skin in a clinical context, collects a clinical history and physical examination of patients with diseases of the pathologies of the musculoskeletal system and skin with the provision of first aid, is well versed in interpreting the results of laboratory and instrumental studies |
| PO 5 | Determines pathological processes at the organ and cellular levels, interprets data on the pathophysiology and morphology of diseases taking                                                          | 1. Is not able to determine pathological processes at the organ and cellular levels, makes gross errors.                                                                                                                                                                                                                                                      | 1. Determines pathological processes at the organ and cellular levels, but makes                                                                                                                                                                                                                                                                                                       | 1. Determines pathological processes at the organ                                                                                                                                                                                                                                                                                                          | 1. Independently determines pathological processes at the organ and cellular                                                                                                                                                                                                                                                                                           |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                                                                                                   |

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|      | <p>into account the clinical data of patients, makes conclusions, explains the patterns of development of complications and outcomes of pathology of the musculoskeletal system and skin, evaluates the results of experimental studies</p>    | <p>2. Is not able to interpret data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients. 3. Makes erroneous conclusions, has poor orientation and does not explain the patterns of development of complications and outcomes of blood and lymph pathology. 4. Is not able to evaluate the results of experimental studies, makes fundamental errors. 5. Is not able to solve situational problems</p> | <p>gross errors. 2. Cannot independently interpret data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients. 3. Makes erroneous conclusions, finds it difficult to independently explain the patterns of development of complications and outcomes of pathologies of the musculoskeletal system and skin. 4. Has difficulty evaluating the results of experimental studies, makes fundamental inaccuracies. 5. Solves situational problems, but makes fundamental mistakes.</p> | <p>and cellular levels. 2. Interprets data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients. 3. Makes conclusions, explains the patterns of development of complication s and outcomes of blood and lymph pathology. 4. Evaluates the results of experimental studies, but allows for minor inaccuracies. 5. Solves situational problems</p> | <p>levels. 2. Independently interprets data on the etiology, pathophysiology and morphology of diseases taking into account the clinical data of patients. 3. Makes conclusions, explains the patterns of development of complications and outcomes of pathology of the musculoskeletal system and skin. 4. Evaluates the results of experimental studies. 5. Effectively solves situational problems</p> |
| PO 6 | <p>Selects medications in accordance with the diagnosis, writes prescriptions, determines the dosage regimen, recognizes adverse effects of medications, predicts the development of side effects and drug interactions in blood and lymph</p> | <p>1. Determines the general pharmacological group 2. Writes out a prescription with errors of drugs.</p>                                                                                                                                                                                                                                                                                                                                                       | <p>1. Selects a pharmacological group of drugs by organs and systems.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <p>1. Selects medications for the treatment and prevention of the most common diseases. 2. Writes out a</p>                                                                                                                                                                                                                                                                                               | <p>1. Selects medications from various pharmacological groups in accordance with indications for use, contraindications</p>                                                                                                                                                                                                                                                                               |

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| <p style="text-align: center;"> ONTÜSTİK QAZAQSTAN<br/> <b>MEDISINA</b><br/> <b>AKADEMIASY</b><br/> «Оңтүстік Қазақстан медицина академиясы» АҚ </p> <p style="text-align: center;">  </p> <p style="text-align: center;"> SOUTH KAZAKHSTAN<br/> <b>MEDICAL</b><br/> <b>ACADEMY</b><br/> АО «Южно-Казахстанская медицинская академия» </p> |              |
| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра пропедевтики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p>                                                                                                | Стр.26 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                                                                                                                           |              |

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|      | pathology                                                                                                                                                             |                                                                                                              |                                                      | prescription for a given medication without errors<br>3. Calculates the dosage of the medication                                                          | and side effects.<br>2. Writes out a prescription for medications in the most appropriate dosage form depending on age, gender, and functional characteristics.<br>3. Calculates doses using various methods and determines the frequency and duration of use of the medication |
| PO 7 | Analyzes professional literature when working with scientific articles, carries out a project, demonstrates a desire for continuous improvement of his/her activities | 1. Does not have research skills.<br>2. Does not have a desire for continuous self-education and development | 2. Writes a prescription using reference literature/ | 1. Analyzes scientific articles on the topics of the lesson.<br>2. Participates in the implementation of the project.<br>3. Completes assignments on time | 1. Analyzes scientific articles on the topics of the lesson.<br>2. Uses international databases in work.<br>3. Successfully defends the completed project.<br>4. Demonstrates motivation for independent work, creatively approaches the completion of tasks                    |

## 10.2 Criteria for assessing teaching methods and technologies

### Multi-point knowledge assessment system

| Letter Grading | Digital equivalent of points | Percentage content | Traditional system assessment |
|----------------|------------------------------|--------------------|-------------------------------|
| A              | 4,0                          | 95-100             | Great                         |
| A -            | 3,67                         | 90-94              |                               |
| B +            | 3,33                         | 85-89              | Fine                          |
| B              | 3,0                          | 80-84              |                               |

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| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.27 из 28                                                                                            |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

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| B - | 2,67 | 75-79 | satisfactory   |
| C + | 2,33 | 70-74 |                |
| C   | 2,0  | 65-69 |                |
| C - | 1,67 | 60-64 |                |
| D+  | 1,33 | 55-59 |                |
| D-  | 1,0  | 50-54 | unsatisfactory |
| FX  | 0,5  | 25-49 |                |
| F   | 0    | 0-24  |                |

#### Checklist for assessing a lesson

| Form of control                                            | grade                                                             | Evaluation criteria                                                                                                                                                                                                                         |
|------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Work in small groups<br>(implementation of practical work) | Excellent<br>matches scores 95-100<br>90-94                       | - completed the practical work on time and without any errors and submitted a report on it;<br>- took an active part in the discussion of the research results;<br>- made a well-reasoned conclusion, while demonstrating original thinking |
|                                                            | Good<br>corresponds to points<br>85-89<br>80-84<br>75-79<br>70-74 | - completed the practical work on time and submitted a report on it, making minor mistakes; - took an active part in the discussion of the research results                                                                                 |
|                                                            | Satisfactory<br>corresponds to points<br>65-69<br>60-64<br>50-54  | - completed the practical work on time and submitted a report on it, having made fundamental mistakes; - was not active during the discussion, needed the teacher's help                                                                    |
|                                                            | Unsatisfactory<br>corresponds to points<br>25-49                  | - failed to submit a report on practical work on time, made gross errors, did not complete all the practical work provided for by the program; - did not take part in the discussion of the results of the work                             |
|                                                            | Неудовлетворительно<br>соответствует баллам<br>0-24               |                                                                                                                                                                                                                                             |

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| <p style="text-align: center;"> ONTÜSTİK QAZAQSTAN<br/> <b>MEDISINA</b><br/> <b>AKADEMIASY</b><br/> «Оңтүстік Қазақстан медицина академиясы» АҚ </p> <p style="text-align: center;">  </p> <p style="text-align: center;"> SOUTH KAZAKHSTAN<br/> <b>MEDICAL</b><br/> <b>ACADEMY</b><br/> АО «Южно-Казахстанская медицинская академия» </p> |  |              |
| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра пропедевтики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p>                                                                                                |  | Стр.28 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                                                                                                                           |  |              |

|                                                                              |                                                                |                                                                                                                                                  |
|------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Case-study                                                                   | Excellent matches scores<br>95-100<br>90-94                    | - solved cases in a certain time;<br>- gave full answers to all questions                                                                        |
|                                                                              | Good corresponds to points<br>85-89<br>80-84<br>75-79<br>70-74 | - solved cases in a certain time;<br>- gave full answers to all questions;<br>- made minor mistakes when solving cases                           |
|                                                                              | Satisfactory corresponds to points<br>65-69<br>60-64<br>50-54  | - solved the cases in a certain amount of time;<br>- gave incomplete answers to questions;<br>- made fundamental mistakes when solving the cases |
|                                                                              | Unsatisfactory corresponds to points 25-49                     | Unsatisfactory corresponds to points                                                                                                             |
|                                                                              | Unsatisfactory corresponds to points 0-24                      |                                                                                                                                                  |
| Work in small groups<br>(interpretation of clinical laboratory test results) | Excellent matches scores<br>95-100<br>90-94                    | - correctly, without any errors, interpreted the results of clinical laboratory tests; - made a well-founded conclusion                          |
|                                                                              | Good corresponds to points<br>85-89<br>80-84<br>75-79<br>70-74 | - correctly interpreted the results of clinical laboratory tests, making minor errors; - made a well-founded conclusion                          |
|                                                                              | Satisfactory corresponds to points<br>65-69<br>60-64<br>50-54  | - correctly interpreted the results of clinical laboratory tests, having made fundamental errors;<br>- made an unfounded conclusion              |
|                                                                              | Unsatisfactory corresponds to points 25-49                     | - correctly interpreted the results of clinical laboratory tests, having made fundamental errors;                                                |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |              |

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|-------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | Unsatisfactory<br>corresponds to points<br>0-24                   | - made an unfounded conclusion                                                                                                                                                                                                    |
| Discussion of the topic | Excellent<br>matches scores<br>95-100<br>90-94                    | - did not make any mistakes during the discussion;<br>- was familiar with the theories, concepts and directions of the discipline and gave them a critical assessment;<br>- used the scientific achievements of other disciplines |
|                         | Good<br>corresponds to points<br>85-89<br>80-84<br>75-79<br>70-74 | - did not make any serious mistakes during the discussion, but made some inaccuracies and minor errors, which he corrected himself; - managed to systematize the program material with the help of the teacher                    |
|                         | Satisfactory<br>corresponds to points<br>65-69<br>60-64<br>50-54  | - made fundamental mistakes during the discussion;<br>- limited himself to only the educational literature specified by the teacher;<br>- experienced great difficulty in systematizing the material                              |
|                         | Unsatisfactory<br>corresponds to points<br>25-49                  | - made gross mistakes during the discussion;<br>- did not study the main literature on the topic of the lesson;                                                                                                                   |
|                         | Неудовлетворительно<br>соответствует баллам<br>0-24               | - failed to use the scientific terminology of the discipline                                                                                                                                                                      |
| Тестирование            | Excellent<br>matches scores<br>95-100<br>90-94                    | - correctly completed 90-100% of test tasks                                                                                                                                                                                       |
|                         | Good<br>corresponds to points<br>85-89<br>80-84<br>75-79<br>70-74 | - correctly completed 70-89% of test tasks                                                                                                                                                                                        |
|                         | Satisfactory<br>corresponds to points                             | - correctly completed 50-69% of test tasks                                                                                                                                                                                        |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                      |              |

|  |                                                  |                                                   |
|--|--------------------------------------------------|---------------------------------------------------|
|  | 65-69<br>60-64<br>50-54                          |                                                   |
|  | Unsatisfactory<br>corresponds to points<br>25-49 | - completed less than 50% of test tasks correctly |
|  | Unsatisfactory<br>corresponds to points<br>0-24  |                                                   |

#### Checklist for assessing practical skills "Propaedeutics of internal diseases"

| Form of control                 | Grade                                                                        | Evaluation criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Выполнение практических навыков | Excellent<br>corresponds to scores<br>A (4.0; 95-100%);<br>A- (3.67; 90-94%) | <ul style="list-style-type: none"> <li>- The student is well versed in questioning and examining patients. Correctly and accurately selects questions when collecting anamnesis, accurately analyzes primary and secondary complaints, is well versed in the collected anamnesis of life and disease.</li> <li>- Accurately conduct a physical examination:               <ul style="list-style-type: none"> <li>- general examination (examination of the skin and subcutaneous fat, visible mucous membrane, measurement of respiratory rate, heart rate, blood pressure);</li> <li>- palpation (determination of resistance, soreness, vocal fremitus, localization, amplitude, area, strength, pulsation, consistency, mobility, diameters, peristalsis, zones of soreness, rigidity),</li> <li>- Percussion (determination of comparative, topographic boundaries of the lungs, area, excursion; determination of the absolute and relative boundaries of the heart, configuration, diameter and vascular bundle; determination of the boundaries of the liver, spleen and stomach, tingling symptom);</li> <li>- auscultation (listening to vesicular and bronchial breathing, wheezing, crepitations, pleural friction noise in the lungs; listening to normal and pathological heart tones and murmurs, diastolic and systolic murmurs).</li> </ul> </li> <li>- Substantiates and makes a presumptive syndromic diagnosis.</li> <li>- Used additional literature when preparing for the lesson. Systematizes material on the topic. Communicates effectively in medical practice, objectively conveys relevant information, knows and uses ethical and deontological standards when performing the skill;</li> </ul> |

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| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  |  |  <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  |  | Стр.31 из 28                                                                                                                                                                             |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |  |                                                                                                                                                                                          |

|  |             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
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|  | <p>Good</p> | <ul style="list-style-type: none"> <li>- The student is well oriented when questioning and examining patients. Correctly selects questions when collecting anamnesis, accurately analyzes primary and secondary complaints, is well oriented in the collected anamnesis of life and disease.</li> <li>- Conduct a physical examination well:             <ul style="list-style-type: none"> <li>- general examination (examination of the skin and subcutaneous fat, visible mucous membrane, measuring respiratory rate, heart rate, blood pressure);</li> <li>- palpation (determination of resistance, soreness, vocal fremitus, localization, amplitude, area, strength, pulsation, consistency, mobility, diameters, peristalsis, zones of soreness, rigidity),</li> <li>- Percussion (determination of comparative, topographic boundaries of the lungs, area, excursion; determination of the absolute and relative boundaries of the heart, configuration, diameter and vascular bundle; determination of the boundaries of the liver, spleen and stomach, tingling symptom);</li> <li>- auscultation (listening to vesicular and bronchial breathing, wheezing, crepitations, pleural friction noise in the lungs; listening to normal and pathological heart tones and murmurs, diastolic and systolic murmurs).</li> </ul> </li> <li>- Makes a presumptive syndrome-based diagnosis without substantiating the data.</li> </ul> |  |
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Кафедра химии, биохимии и молекулярной биологии  
Кафедра патологии и судебной медицины  
Кафедра фармакологии, фармакотерапии и клинической фармакологии  
Кафедра пропедевтики внутренних болезней  
Кафедра «Педиатрия-1»  
Кафедра фтизиопульмонологии и радиологии

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Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)

corresponds to  
scores

- The student is able to navigate through questioning and examining patients, analyzes primary and secondary complaints with errors, has poor understanding of the collected anamnesis of life and disease.
- There are errors in conducting a physical examination:
  - general examination (examination of the skin and subcutaneous fat, visible mucous membrane, measurement of respiratory rate, heart rate, blood pressure);
  - palpation (determination of resistance, soreness, vocal fremitus, localization, amplitude, area, strength, pulsation, consistency, mobility, diameters, peristalsis, zones of soreness, rigidity),
  - percussion (determination of comparative, topographic boundaries of the lungs, area, excursion; determination of absolute and relative boundaries of the heart, configuration, diameter and vascular bundle; determination of the boundaries of the liver, spleen and stomach, tingling symptom);
  - auscultation (listening to vesicular and bronchial breathing, wheezing, crepitations, pleural friction noise in the lungs; listening to normal and pathological heart tones and murmurs, diastolic and systolic murmurs).
- Incapable of comparing the relationship between the main symptoms and syndromes. Makes a presumptive syndrome-based diagnosis without substantiating the data
- Low level of communication in medical practice; subjectively conveys relevant information;

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| <p style="text-align: center;"> ONTÜSTİK QAZAQSTAN<br/> <b>MEDISINA<br/> AKADEMIASY</b><br/> «Оңтүстік Қазақстан медицина академиясы» АҚ </p> <p style="text-align: center;">  SOUTH KAZAKHSTAN<br/> <b>MEDICAL<br/> ACADEMY</b><br/> АО «Южно-Казахстанская медицинская академия» </p> |              |
| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра пропедевтики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p>                                             | Стр.33 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                                                                        |              |

|  |                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
|--|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <p>Unsatisfactory corresponds to points FX (0.5; 25-49%)</p> | <ul style="list-style-type: none"> <li>- The student has no idea about the main and secondary complaints, is not guided by the collected anamnesis of life and disease.</li> <li>- Is not able to conduct practical skills to interpret their results. Does not see the connection between the data of an objective physical examination:</li> <li>- general examination (examination of the skin and subcutaneous fat, visible mucous membrane, measurement of respiratory rate, heart rate, blood pressure);</li> <li>- palpation (determination of resistance, soreness, vocal fremitus, localization, amplitude, area, strength, pulsation, consistency, mobility, diameters, peristalsis, zones of soreness, rigidity),</li> <li>- Percussion (determination of comparative, topographic boundaries of the lungs, area, excursion; determination of the absolute and relative boundaries of the heart, configuration, diameter and vascular bundle; determination of the boundaries of the liver, spleen and stomach, tingling symptom);</li> <li>- auscultation (listening to vesicular and bronchial breathing, wheezing, crepitations, pleural friction rub in the lungs; listening to normal and pathological heart tones and murmurs, diastolic and systolic murmur).</li> <li>...</li> <li>Does not find and is not able to compare the relationship between the main symptoms and syndromes. Makes a presumptive syndrome-based diagnosis without substantiating the data</li> <li>- Did not participate in the work of the group. Is not able to communicate in medical practice; does not convey proper information, does not know and is not able to use the norms of ethics and deontology when performing the skill.</li> <li>When answering the teacher's questions, gross errors, not using specific terminology in answers.</li> </ul> |  |
|  | <p>Unsatisfactory corresponds to points FX (0.5; 25-49%)</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |

#### Checklist of situational tasks

| № | Evaluation criteria                                                                                                                                                                                                                                                                                                                                                                                                             | Points                            |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 1 | Demonstrates original thinking when analyzing a situational task. Fully utilizes theoretical knowledge necessary to solve a given task. Demonstrates excellent knowledge of reference biochemical parameters when interpreting the proposed biofluid analysis data. Demonstrates the ability to draw logical conclusions on a situational task, while demonstrating a deep understanding of the necessary educational material. | <p>«Excellent»</p> <p>90-100%</p> |

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| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

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| 2 | Possesses the necessary knowledge to solve this situational task. Allows for minor inaccuracies when discussing this case. Is able to draw correct conclusions on the proposed situational task. | "Good"<br>70-89%          |
| 3 | Allows minor inaccuracies when discussing a given task, has difficulty interpreting analyses proposed in a situational task. Draws conclusions with difficulty.                                  | "Satisfactory"<br>50-69%  |
| 4 | Allows fundamental errors in discussing a situational task. Passive, unable to draw appropriate conclusions.                                                                                     | "Unsatisfactory"<br>0-49% |

#### Checklist for practical lesson

| №                  | Evaluation criteria                                  | Level |      |                |                |
|--------------------|------------------------------------------------------|-------|------|----------------|----------------|
|                    |                                                      | Great | Fine | Satisfactorily | Unsatisfactory |
| Practical classes: |                                                      |       |      |                |                |
| 1                  | Written response to the questions of this assignment | 30    | 21   | 15             | 0              |
| 2                  | Oral answer to the questions of this task            | 30    | 21   | 15             | 0              |
| 3                  | Completing test tasks                                | 12    | 8    | 6              | 0              |
| 4                  | Solving situational problems                         | 28    | 20   | 14             | 0              |
|                    | General:                                             | 100   | 70   | 50             | 0              |

#### Checklist SRO and SROP

| №            | Evaluation criteria                | Уровень |      |                |                |
|--------------|------------------------------------|---------|------|----------------|----------------|
|              |                                    | Great   | Fine | Satisfactorily | Unsatisfactory |
| SRO and SROP |                                    |         |      |                |                |
| 1            | Presentation Defense               | 50      | 35   | 25             | 0              |
| 2            | Implementation of practical skills | 50      | 35   | 25             | 0              |
|              | General:                           | 100     | 70   | 50             | 0              |

#### Checklist for assessing answers to descriptions of macropreparations

| № | Evaluation Criteria/Evaluation | Great | Fine | Satisfactorily | Unsatisfactory |
|---|--------------------------------|-------|------|----------------|----------------|
| 1 | Name of the organ              | 4     | 3    | 2              | 0              |

|                                                                                                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                       |
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| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра профилактики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p> |  | Стр.35 из 28                                                                                                                                                                                                                          |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                            |  |                                                                                                                                                                                                                                       |

|   |                                                                                                                                           |    |    |    |   |
|---|-------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---|
| 2 | Organ size                                                                                                                                | 10 | 7  | 5  | 0 |
| 3 | Surface:<br>condition of capsule or serous membrane,<br>dullness, shine, overlap                                                          | 1  | 1  | 1  | 0 |
| 4 | Characteristics of the pathological focus:<br>Location, size, shape (if an ulcer - the<br>condition of the bottom), color,<br>consistency | 5  | 4  | 2  | 0 |
| 5 | Pathological diagnosis/conclusion                                                                                                         | 5  | 4  | 2  | 0 |
| 6 | Total                                                                                                                                     | 20 | 15 | 10 | 0 |

#### Checklist for assessing answers to descriptions of microscopic specimens

| № | Evaluation Criteria/Evaluation                                           | Great | Fine | Satisfactorily | Unsatisfactory |
|---|--------------------------------------------------------------------------|-------|------|----------------|----------------|
| 1 | Name of an organ or tissue                                               | 4     | 3    | 2              | 0              |
| 2 | Characteristics of pathological<br>changes:<br>localization, description | 10    | 7    | 5              | 0              |
| 3 | Coloring                                                                 | 1     | 1    | 1              | 0              |
| 4 | Pathological diagnosis/conclusion                                        | 5     | 4    | 2              | 0              |
| 5 | Total                                                                    | 20    | 15   | 10             | 0              |

#### Checklist for assessing the analysis of scientific articles

| Score in %                      | Unsatisfactory (0-49%)                                             | Satisfactory (65-54%)                                                                                  | Fine (70-89%)                                                                                  | Excellent (90-100%)                                                                                                         |
|---------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Evaluation criteria             |                                                                    |                                                                                                        |                                                                                                |                                                                                                                             |
| <b>Structure of the article</b> | 1. Does not name the structural components of a scientific article | 1. Does not follow the order of the structure of the scientific article when listing, skips components | 1. Lists the structural components of a research paper but violates the order of the structure | 1. Observes the order of the structure of a scientific article when listing:<br>- Title<br>- Authors<br>- Publisher- Резюме |

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| <p>ONTÜSTIK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p> <p> SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |              |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p>              | Стр.36 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                      |              |

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|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                 |                                                                                                              |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                              | <ul style="list-style-type: none"> <li>- General part (introduction, purpose, materials and methods, results and discussion)</li> <li>- Conclusions</li> <li>- References</li> </ul>                                                                                                                                                                                            |
| Analysis of the content of a scientific article                                 | 1. Does not understand the relevance of the problem, is not capable of discussing the content of the article | 1. Understands the relevance of the problem<br>2. Lists the purpose of the work, the materials and methods used in the work<br>3. Understands the content of the scientific article<br>4. Lists the conclusions, the list of references in this article | 1. Assumes the relevance of the problem<br>2. Explains the purpose of the work, the materials used in the work and methods<br>presents the content of the scientific article<br>3. Justifies the conclusions<br>4. Justifies the selected list of references in this article | 1. Independently substantiates and argues the relevance of the problem<br>2. Explains the purpose of the work, the materials and methods used in the work<br>3. Freely presents the semantic content of the scientific article<br>4. Argues and justifies the conclusions<br>5. Has the skill of using literature and justifies the selected list of literature in this article |
| Answer to additional questions (on the topic of the article for the discipline) | 1. Does not answer additional questions on the topic                                                         | 1. Does not understand the problem at hand when answering additional questions                                                                                                                                                                          | 1. Apply knowledge gained during practical lessons on the topic when answering additional questions                                                                                                                                                                          | 1. Apply knowledge gained during practical lessons on the topic when answering additional questions, provides deep, comprehensive argumentation                                                                                                                                                                                                                                 |

#### Checklist for assessing scientific article analysis

#### Checklist for assessing prescription writing

|                             |                                                                                                   |                                                                                                                                                                                                                                                                                                                           |
|-----------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Prescription writing</b> | <p>Excellent</p> <p>Corresponds to ratings:</p> <p>A (4.0; 95-100%);</p> <p>A- (3.67; 90-94%)</p> | <p>Writes out a prescription for medicines in the most appropriate dosage form depending on age, gender, and functional characteristics. Writes out a prescription for the selected medicine without errors. Calculates doses using various methods and determines the frequency and duration of use of the medicine.</p> |
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| <p style="text-align: center;"> ONTÜSTIK QAZAQSTAN<br/> <b>MEDISINA</b><br/> <b>AKADEMIASY</b><br/> «Оңтүстік Қазақстан медицина академиясы» АҚ </p> <p style="text-align: center;">  SOUTH KAZAKHSTAN<br/> <b>MEDICAL</b><br/> <b>ACADEMY</b><br/> АО «Южно-Казахстанская медицинская академия» </p> |              |
| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра пропедевтики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p>                                                           | Стр.37 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                                                                                      |              |

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|--|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Good</p> <p>Meets ratings:</p> <p>B+ (3.33; 85-89%)</p> <p>B (3.0; 80-84%)</p> <p>B- (2.67; 75-79%)</p> <p>C+ (2.33; 70-74%)</p>                | <p>Writes out a prescription for the selected drug without errors. Calculates the dose of the drug. Limits itself to general instructions "Internal", "External".</p> |
|  | <p>Satisfactory</p> <p>Corresponds to grades:</p> <p>C (2.0; 65-69%)</p> <p>C- (1.67; 60-64%)</p> <p>D+ (1.33; 55-59%)</p> <p>D- (1.0; 50-54%)</p> | <p>Writes out a prescription using reference literature/sources. Allows corrections to the prescription.</p>                                                          |
|  | <p>Unsatisfactory</p> <p>FX (0.5; 25-49%)</p> <p>F (0; 0-24%)</p>                                                                                  | <p>Writes out a prescription with errors.</p>                                                                                                                         |

| 11                   | Educational resources |                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electronic resources |                       | 1. Electronic library of SKMA - <a href="https://e-lib.skma.edu.kz/genres">https://e-lib.skma.edu.kz/genres</a><br>2. Republican Interuniversity Electronic Library (RIEL) - <a href="http://rmebrk.kz/">http://rmebrk.kz/</a><br>3. Digital library "Aknurpress" - <a href="https://www.aknurpress.kz/">https://www.aknurpress.kz/</a><br>4. Electronic library "Epigraph" - <a href="http://www.elib.kz/">http://www.elib.kz/</a> |

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| <p style="text-align: center;"> ONTÜSTİK QAZAQSTAN<br/> <b>MEDISINA<br/> AKADEMIASY</b><br/> «Оңтүстік Қазақстан медицина академиясы» АҚ </p> <p style="text-align: center;">  SOUTH KAZAKHSTAN<br/> <b>MEDICAL<br/> ACADEMY</b><br/> АО «Южно-Казахстанская медицинская академия» </p> |              |
| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра пропедевтики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p>                                             | Стр.38 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                                                                        |              |

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|                      | <p>5. Epigraph - portal of multimedia textbooks<br/> <a href="https://mbook.kz/ru/index/">https://mbook.kz/ru/index/</a></p> <p>6. Electronic library system IPR SMART<br/> <a href="https://www.iprbookshop.ru/auth">https://www.iprbookshop.ru/auth</a></p> <p>7. Information and legal system "Zan" - <a href="https://zan.kz/ru">https://zan.kz/ru</a></p> <p>8. Cochrane Library - <a href="https://www.cochranelibrary.com/">https://www.cochranelibrary.com/</a></p> <p>20. Website of SKMA:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Electronic textbooks | <p>Ivashkin, V. T. Internal diseases propedeutics [Electronic resource]: textbook / V. T. Ivashkin, A. V. Okhiobystin. - Electronic text data (142 MB). - M.: GEOTAR - Media, 2017. - electronic optical disc (CD-ROM).</p> <p>Internal diseases. Vol. 2 [Electronic resource]: textbook / edited by V. S. Moiseev. - 3rd ed., corrected and enlarged. - Electronic text data (45.1 MB). - M.: GEOTAR - Media, 2015. - 895 p.</p> <p>Internal diseases. Vol. 1 [Electronic resource]: textbook / edited by V. S. Moiseev. - 3rd ed., corrected and enlarged. - Electronic. text data (66.5MB). - M.: GEOTAR - Media, 2015. - 960 p.</p> <p>Ishki aurular./Bimurzaev G.N., Zaripova G.K., 2020/<a href="https://aknurpress.kz/reader/web/2594">https://aknurpress.kz/reader/web/2594</a></p> <p>Ishki aurular pәninen klinikalyk tapsyrmalar zhinagy. Erzhanova G.A., Mukhanova A.K., 2016/<a href="https://aknurpress.kz/reader/web/2370">https://aknurpress.kz/reader/web/2370</a></p> <p>Shki aurular propedeuticsynan zhardayattyk tapsyrmalar Orazova B.O., Marchenko T.V., 2016 /<a href="https://aknurpress.kz/reader/web/2348">https://aknurpress.kz/reader/web/2348</a></p> <p>Propaedeutics of internal diseases: Textbook. / TS Ryabova, ES Ryss, VY Plotkin et al. - SPb.: SpetsLit, 2015. - 414 p.<a href="http://rmebrk.kz/">http://rmebrk.kz/</a></p> <p>Internal diseases in the work of a general practitioner: Tutorial. / K.Zh. Sadykova, Sh.U. Skenderova, SK Sattieva. - Turkestan: Turan, 2017. - 96 p. <a href="http://rmebrk.kz/">http://rmebrk.kz/</a></p> <p>Zhamankulov, Kydyrkozha Abdolkarimuly.Ishki aurular [Matin]: okulyk / K. A. Zhamankulov; Batys Kazakhstan meme. medicine academician.. - Aktope: [b. zh.], 2013. - 669 b. <a href="https://elib.kaznu.kz/book/1767">https://elib.kaznu.kz/book/1767</a></p> <p>Propaedeutics of internal diseases: Textbook. – 6th ed., I - volume reworked and additional (Text. lit. For students of medical universities). – Almaty: Evero, 2020. – 400 p. <a href="https://elib.kz/ru/search/read_book/676/">https://elib.kz/ru/search/read_book/676/</a></p> <p>Propaedeutics of Internal Diseases: Textbook. - 6th ed., Volume II revised and enlarged. (Textbook. literature. For students of medical universities). - Almaty: Evero, 2020. - 212 p. <a href="https://elib.kz/ru/search/read_book/682/">https://elib.kz/ru/search/read_book/682/</a></p> <p>Propaedeutics of Internal Diseases: Textbook. - 6th ed., Volume III revised and enlarged. (Textbook. literature. For students of medical universities). - Almaty: Evero, 2020. - 208 p. <a href="https://elib.kz/ru/search/read_book/684/">https://elib.kz/ru/search/read_book/684/</a></p> <p>Nursultanova S.D., Bakirova R.E., Mamashalieva S.B., Bekov E.K., Madiyeva L.S. technics. Oku-әdistemelik kural.- Almaty, “Evero” baspasy. -2020. <a href="https://elib.kz/ru/search/read_book/705/">https://elib.kz/ru/search/read_book/705/</a>Ахметов Қайырғали Жәлелұлы. Ішкі</p> |

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| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра пропедевтики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p>                                             | Стр.39 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                                                                                        |              |

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|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                               | <p>Propaedeutics of diseases<br/> clinical lectures. Almaty: "Evero", 2020. – 262 pages<br/> <a href="https://elib.kz/ru/search/read_book/22/">https://elib.kz/ru/search/read_book/22/</a><br/> Propaedeutics of internal diseases. Textbook Aitmbet B.11- Almaty "Evero"<br/> 2018, -568 pages. <a href="https://elib.kz/ru/search/read_book/3086/">https://elib.kz/ru/search/read_book/3086/</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Laboratory Physical Resources |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Literature                    | <p>Basic Literature (BL)</p> <p>Vasilenko, V. Kh. Propedeutics is an internal disease. T. 1. : Textbook / V. Kh. Vasilenko, V. V. Vasilenko; . - Almaty: Newbook, 2021. - 400 p.</p> <p>Vasilenko, V. Kh. Propedeutics is an internal disease. T. 2. : Textbook / V. Kh. Vasilenko, V. V. Vasilenko; . - Almaty: Newbook, 2021. - 212. p.</p> <p>Vasilenko, V. Kh. Propedeutics is an internal disease. T. 3. : Textbook / V. Kh. Vasilenko, V. V. Vasilenko; . - Almaty: Newbook, 2021. - 208. p.</p> <p>Mukhin, N. A. Internal medicine propaedeutics: textbook. - M. : GEOTAR - Media, 2015. - 672 pages-</p> <p>Vasilenko, V. Kh. Propaedeutics of internal diseases. T. 1. [Text] : textbook / V. Kh. Vasilenko, V. V. Vasilenko ; mem. language aud. K. Askambay. - Almaty : Evero, 2015. - 336 p. s</p> <p>Vasilenko, V. Kh. Propaedeutics of internal diseases. T. 2 [Text] : textbook / V. Kh. Vasilenko, V. V. Vasilenko ; mem. language aud. K. Askambay. - Almaty : Evero, 2015. - 176 p. s</p> <p>Vasilenko, V. Kh. Propaedeutics of internal diseases. T. 3 [Text] : textbook / V. Kh. Vasilenko, V. V. Vasilenko ; mem. language aud. K. Askambay. - Almaty: Evero, 2015. - 192 p. s</p> <p>Aitbembet, B. N. Propaedeutics of internal diseases: textbook Almaty: Evero, 2014. - 568 p. -</p> <p>Makolkina, V. I. Internal diseases: textbook. - M.: GEOTAR - Media, 2014. - 976 p.</p> <p>Grebenev, A. L. Propaedeutics of internal diseases [Text]: textbook / A. L. Grebenev. - 5th ed., revised and supplemented. - Almaty: Evero, 2014. - 520 p.</p> <p>"Respiratory system" module: integrated textbook = Module "Respiratory system": integrated textbook / S. K. Zhaugasheva [ed. p.] ; responsible editors S. B. Zhautikova, S. D. Nursultanova. - M.: "Litterra", 2014. - 272 p. p.</p> <p>"Cardiovascular system" module: integrated textbook = Module "Cardiovascular system": integrated textbook / S. B. Zhaugasheva [ed. p.] ; responsible editor S. B. Zhautikova, S. D. Nursultanova. - M.: "Litterra", 2014. - 344 p. p. : ill.</p> <p>"Digestive system" module: integrated textbook = Module "Digestive system": integrated textbook / S. K. Zhaugasheva [ed. p.] ; responsible editor S. B. Zhautikova, S. D. Nursultanova. - M.: "Litterra", 2014. - 376 p. p. : ill.</p> <p>"Excretory system" module: integrated textbook = Module "Urinary system": integrated textbook / S. K. Zhaugasheva [ed. p.] ; responsible editor S. B. Zhautikova, S. D. Nursultanova. - M. : Litterra, 2014. - 256 p. p. : ill.</p> <p>"Blood-forming system" module: integrated textbook = Module "Hematopoietic system": integrated textbook / S. K. Zhaugasheva [ed. p.] ;</p> |

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| <p style="text-align: center;"> Кафедра химии, биохимии и молекулярной биологии<br/> Кафедра патологии и судебной медицины<br/> Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/> Кафедра пропедевтики внутренних болезней<br/> Кафедра «Педиатрия-1»<br/> Кафедра фтизиопульмонологии и радиологии </p>                                                           | Стр.40 из 28 |
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responsible editor S. B. Zhautikova, S. D. Nursultanova. - M.: "Littera", 2014. - 288 p. p.

"Endocrine system" module: integrated textbook = Module "Endocrine system": integrated textbook / S. K. Zhaugasheva [ed. p.] ; responsible editor S. B. Zhautikova, S. D. Nursultanova. - M.: "Littera", 2014. - 328 p. p.

"Musculoskeletal system" module: integrated textbook = Module "Musculoskeletal system": integrated textbook / S. K. Zhautikova [ed. p.] ; responsible ed. S. B. Zhautikova, S. D. Nursultanova. - M.: Littera, 2014. - 240 p. p. : ill.

"Nervous system" module: integrated textbook = Module "Nervous system": integrated textbook / S. K. Zhautikova [ed. p.] ; responsible ed. S. B. Zhautikova, S. D. Nursultanova. - M.: "Littera", 2014. - 264 p. p. : ill.

Vasilenko, V. K. Propaedeutics of internal diseases. 1-volume: textbook / - Almaty: "Evero", 2017. - 364 p.

Vasilenko, V. K. Propaedeutics of internal diseases. Volume 2: textbook / - Almaty: "Evero", 2017. - 364 p.

Vasilenko, V. K. Propaedeutics of internal diseases. 3-volume: textbook / - Almaty: "Evero", 2017. - 188 p

1. Biochemistry, pod ed. Chl.-corr. RAN, prof. E.S. Severina. - M., 2011
2. Tapbergenov S.O. "Medical and clinical biochemistry." - Evero, 2017. Itom;
3. Tapbergenov S.O. "Medical and clinical biochemistry." - Evero

Further reading (FBL).

Omarov, TR Emergencies in the Clinic of Internal Medicine [Text]: a tutorial / TR Omarov, VA Omarova. - Karaganda: AKNUR, 2019. - 518 p.

Diagnosis of diseases of internal organs. Formulation, classification [Text]: a tutorial / edited by V. A. Akhmedov. - M.: GEOTAR - Media, 2016. - 256

Mukhin, NA Selected lectures on internal medicine [Text]: lecture / NA Mukhin. - 2nd ed. - M.: GEOTAR - Media, 2017. - 328 p.

Ishki aurular boyynsha objectivetendirilgen kuramdaytyrlygan klinikalyk emtihan: oku-adistemelik kural = Objective structured clinical examination in internal diseases: educational methodological manual / M. Ospanov atyndagy BKMMU; Kuras. K.Zh. Akhmetov [reinforced concrete]. - M.: "Littera", 2016. - 368 b.

Textbook: educational and methodological tool / G. M. Yesenzhanova [Zh. p.] ; Ministry of Health and Social Development of the Republic of Kazakhstan. - 2nd ed. complete. and edited. - Karaganda: JK "Aknur", 2015. - 80 p.

Akhmetov K. Clinical lectures on propaedeutics of internal diseases; teaching tool

PDB Main:

1. Isaeva, L. A. Children's diseases. Volume 1]: textbook. - Almaty: Evero, 2015.
2. Isaeva, L. A. Children's diseases. Volume 2: textb

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| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> | Стр.41 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |              |

#### Requirements for students (attendance, behavior, grading policy, penalties, incentives, etc.)

- observe medical ethics and deontology;
- do not smoke in the academy;
- keep the department clean;
- do not damage furniture in classrooms;
- treat textbooks with care;
- maintain the appearance of a medical university student;
- comply with safety regulations;
- wear medical masks during quarantine and comply with sanitary and epidemiological regulations;
- do not miss classes without a good reason;
- make up classes missed for a good reason on time, but only with permission from the dean's office and at the time determined by the teacher;
- do not be late for classes;
- have the necessary documentation in class: syllabus, methodological instructions for classes, lectures, notebook and textbook;
- prepare for classes in good faith;
- be active during classes;
- do not engage in extraneous activities during classes: do not talk, do not smoke, do not chew gum, do not eat, do not use the phone, do not listen to music, do not read newspapers and magazines, do not prepare for classes in another subject;
- maintain silence and order during breaks;
- complete SRO on time.

#### Penalties for failure to complete sections of the work:

- if you miss lectures without a good reason, your midterm assessment grade is reduced - 1 point for each missed lecture;
- if you miss SRO without a good reason, your midterm assessment grade is reduced - 2 points for each missed class;
- in case of a single violation of the discipline policy, the student is given a warning;
- in case of a systematic violation of the discipline policy, information about the student's behavior is sent to the faculty dean's office.

#### Criteria for non-admission to the final assessment:

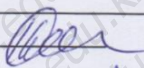
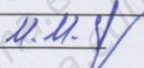
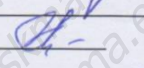
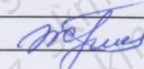
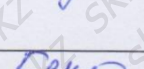
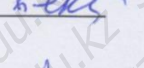
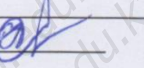
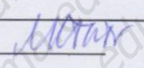
a student who has received an unsatisfactory grade for one of the types of assessments (RC 1, RC 2, average grade of the current assessment) is not admitted to the final assessment for the discipline.

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|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13. | <b>Academic policy based on the moral and ethical values of the academy</b>                                                                                                                                                                                                                                                                   |
|     | Regulations and Rules of SKMA. Academic policy.                                                                                                                                                                                                                                                                                               |
|     | P.4. Code of honor of the student                                                                                                                                                                                                                                                                                                             |
|     | P.10. Organization of the educational process                                                                                                                                                                                                                                                                                                 |
|     | <p>P.12. Grading Policy</p> <p>The final grade is calculated automatically based on the average grade of the current assessment, the average grade of the midterm assessment, and the grade of the final assessment.</p> <p>Final grade (100%) = RD (60%) + IC (40%)</p> <p>RD (60%) = RKsr (20%) + TKsr (40%)</p> <p>RKsr = (RK1 + RK2):</p> |

|                                                                                                                                                                                                                                                                                                       |              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p> <p> SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |              |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p>              | Стр.42 из 28 |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                                      |              |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Final grade (100%) = PKcp x 0.2 + TKcp x 0.4 + IK x 0.4</b><br/> <b>RD – admission rating</b><br/> <b>IK – final control grade</b><br/> <b>PKcp – average grade of midterm control taking into account penalty points</b><br/> <b>TKcp – average grade of current control taking into account SRO</b><br/> <b>PK1 – midterm control 1</b><br/> <b>PK2 – midterm control 2</b></p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------|
| <p>ONTÜSTİK QAZAQSTAN<br/><b>MEDISINA<br/>AKADEMIASY</b><br/>«Оңтүстік Қазақстан медицина академиясы» АҚ</p>                                                                                                                                                                             |  | <p>SOUTH KAZAKHSTAN<br/><b>MEDICAL<br/>ACADEMY</b><br/>АО «Южно-Казахстанская медицинская академия»</p> |
| <p>Кафедра химии, биохимии и молекулярной биологии<br/>Кафедра патологии и судебной медицины<br/>Кафедра фармакологии, фармакотерапии и клинической фармакологии<br/>Кафедра пропедевтики внутренних болезней<br/>Кафедра «Педиатрия-1»<br/>Кафедра фтизиопульмонологии и радиологии</p> |  | Стр.43 из 28                                                                                            |
| Рабочая учебная программа дисциплины «Опорно-двигательный аппарат и кожа в патологии» (Силлабус)                                                                                                                                                                                         |  |                                                                                                         |

| 14                                                                                  | Согласование, утверждение и пересмотр                 |                                              |                                                                                              |
|-------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------------------|
| Дата согласования с Библиотечно-информационным центром                              | Протокол № <u>9</u><br>« <u>14</u> » <u>06</u> 2024г  | Ф.И.О. руководителя БИЦ<br>Дарбичева Р.И.    | Подпись   |
| Дата утверждения на кафедре биологии и биохимии                                     | Протокол № <u>13</u><br>« <u>30</u> » <u>05</u> 2024г | Ф.И.О. заведующего кафедрой Есиркепов М.М.   | Подпись   |
| Дата утверждения на кафедре патологии и судебной медицины                           | Протокол № <u>11</u><br>« <u>26</u> » <u>05</u> 2024г | Ф.И.О. заведующего кафедрой Садыкова А.Ш.    | Подпись   |
| Дата утверждения на кафедре фармакологии, фармакотерапии и клинической фармакологии | Протокол № <u>11</u><br>« <u>10</u> » <u>06</u> 2024г | Ф.И.О. заведующего кафедрой Токсанбаева Ж.С. | Подпись   |
| Дата утверждения на кафедре пропедевтики внутренних болезней                        | Протокол № <u>10</u><br>« <u>30</u> » <u>05</u> 2024г | Ф.И.О. заведующего кафедрой Бекмурзаева Э.К. | Подпись   |
| Дата утверждения на кафедре «Педиатрия-2»                                           | Протокол № <u>  </u><br>«    »    2024г               | Ф.И.О. заведующего кафедрой Кемелбеков К.С.  | Подпись   |
| Дата утверждения на кафедре фтизиопульмонологии и радиологии                        | Протокол № <u>14</u><br>« <u>13</u> » <u>06</u> 2024г | Ф.И.О. заведующего кафедрой Касаева Л.Т.     | Подпись   |
| Дата одобрения на АК ОП                                                             | Протокол № <u>11</u><br>« <u>14</u> » <u>06</u> 2024г | Ф.И.О. председателя АК ОП<br>Калменов Н.Ж.   | Подпись  |