#### Educational program 6B10101 "General Medicine", 5-course

| \'Ì.\ | General information about the discip                 | line      | 300 / K 2, KU, 30 90. KT   |
|-------|--|-----------|----------------------------|
| 1.1   | Discipline code: VD 5202                             | 1.6       | Academic year: 2024-2025   |
| 01.2  | Discipline name "Visual diagnostic"                  | 1.7       | Course: 5                  |
| 1.3   | Prerequisites: fundamentals of radiation diagnostics | 1.8       | Semester:9                 |
| 1.4   | Post requisites: general practitioner                | 1.9       | Amount of credits(ECTS): 4 |
| 1.5   | Cycle; VD  | 1.10      | 86 Vo. 80 Mig. 1 St. vs.   |
| 51    | 100 m. 15 2k. 210.                                   | 30, 7/1/4 | Component: VK              |
| 2     | Course disaportion (150 words)                       | ~(), ·    | A SOUND SOUND              |

#### 2. | Course discpeption (150 words)

X ray of organs and systems. Clinical and radiological syndromes, diagnostic algorithms for diseases and injuries of internal organs, features in children and adolescents. Possibilities of X-ray, ultrasound, CT, MRI in diagnostics of benign and malignant tumors of organs and systems. Preclinical radiation diagnostics. Main radiological symptoms and syndromes, differential diagnostics, image interpretation, occupational safety. Documentation of medical services processes.

| 3.  | Summative assessment form                | Krus. So. | Mr. KT 3 SKILLIS SIEGO |
|-----|--|-----------|------------------------|
| 3.1 | Testing                                  | 3.5       | Coursework             |
| 3.2 | Writing                                  | 3.6       | Essay                  |
| 3.3 | Oral                                     | 3.7       | Project                |
| 3.4 | SPE / OSKE or practical skills reception | 3.8       | Another(specify)       |
|     |  |           |                        |

#### 4. Discipline aims

To develop graduates' knowledge and skills in conducting effective events on radiological diagnostics of diseases and damage to organs and systems, observing measures to protect patients and health workers; to apply practical and communication skills to evaluate research results in accordance with the principles of the evidence base, ensuring further successful application in clinical practice.

| 1.1        | * all   | ccessful application in clinical practice.   |
|------------|---|--|
| 5.         | Final learning outcomes (L                        | O disciplines)   |
| LO<br>1. 2 | LO 4 Conducts effective activit forms of diseases | ties aimed at diagnostics, treatment, prevention of common and early   |
| LO<br>3.   |   | ciples, methods and knowledge in medical practice and research. ducation and development. Introduces new methods into clinical                             |
| LO<br>4.   |   | rds for the implementation of public health protection, sanitary and are organization and epidemiological safety of the environment, labor re organization |
| LO<br>5    |   | databases of the healthcare system of the Republic of Kazakhstan, rocesses of providing medical services.  |
| 5.1        | LO discipline<br>LO 1                             | The learning outcomes of the EP related to the discipline RO  LO 1 Provides patient-centered care in the field of biomedical,                              |

clinical, epidemiological and social-behavioral sciences for the

## OŃTÚSTIK-QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ ОНТУСТІК ҚАЗАҚСТАН МЕДИЦИНА АКАДЕМИЯСЫ АҚ

Department of Phtiziopulmonology and radiology

Syllabus: «Vısual dıagnostıc»

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| 9/2                   | LO 4  | most   | common d   | liseases.   | - CKU  | VQ. (  | 30/1/  | 1 5 11  |
|-----------------------|---|--|--|---|--|--|--|---|
| 6. Kus                | LO 5  Details of the discipline                             | LO 4 treati LO 3 subor skills coop LO 1 the R                              | Conducts<br>ment, preve<br>Complies<br>rdination, consideration with<br>Personal Complex<br>O Works in<br>Republic of<br>cesses of ren | effective<br>ention of<br>with the<br>demonstr<br>effective<br>h patient<br>n electron<br>Kazakhs<br>dering n | rules (<br>ates in<br>e exch<br>s, their<br>nic dat<br>stan, er<br>nedical | on and ear<br>of ethics, of<br>terpersonal<br>ange of in<br>families a<br>abases of the<br>abases doc<br>diservices. | rly forms<br>deontolog<br>al and conformation<br>and healt<br>the healtl<br>umentati | s of diseases.  gy and  mmunication  n and  h workers.  ncare system of |
| 6.1                   | Shymkent, Clinika "Tyn                                      | ik"6 Ryskulova   | a 33 st, , en  | nail addr   | ess - e  | l_nur2@m   | nail.ru  | AU. KI  |
| 6.2                   | Number of hours   | Lecture  | Pract.less   | sons.   | Lab.le   | esson SI   | W  | SIW (with teacher)  |
|                       | 17. KI 3 CKI, VS.   | 10   | 30   | · 3.  | <u>-90</u>   | 12   | 9,10   | 68  |
| 7.0                   | Information about teach                                     | ers  | 1 3, 1   | 1111  |  | M. Kr  | SH   | 100 Sep 71  |
| No                    | Full name   | Degree and profession  | email  | Scie  | ntific i   | nterests.  | F 1  | Achevements   |
| 1.                    | Amangeldieva Zhibek<br>Nurtasovna                           | assistant<br>department  | visual_<br>diagnos<br>tics@m<br>al.ru  | 1.KZ  | Skillic  | Waish St   | Radio  | ologist   |
| 2.                    | Abduvachabova Gulnar  | assistant<br>department  | Kusus  | Social  | N.V.   | 3 5/4  | ultras   | sonologyst  |
| 3                     | Khamidulla Sakhar   | assistant<br>department  | sseet32<br>1@gma<br>il.com   | Abdom   | ninal u  | ltrasound  |  | er category,<br>conologyst  |
| 8.                    | Thematic plan   | War Son  | 11. 11.  | D. Chilli   | √Q.  | 601  | KI S   | KIN J.  |
| A<br>wee<br>k/<br>day |   | Summary  | rugiednik  | RO<br>discip<br>lines   | Nu<br>mb<br>er<br>of<br>ho<br>urs  | Forms/N<br>s/<br>learning<br>technolo  | 90.47  | Forms/<br>assessment<br>methods   |
| skr.                  | diagnostics of<br>diseases and injuries<br>of the lungs and | Radiation diagodiseases and in the lungs and mediastinum. I research metho | juries of<br>Radiation   | LO 1  | Skill<br>Skills  | Overviev<br>illustrati<br>presenta   | ve,  | Feedback  |
|                       | Practical lesson.   | Radiation diag   | nosis of   | LO 1  | 3  | discussion   | on, work   | oral  |

south каzakhstan

MEDICAL

ACADEMY

AO «Южно-Казахстанская медицинская академия»

AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ ACADEMY AO «Южно-Ка: Department of Phtiziopulmonology and radiology

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| 15  | Radiation diagnostics   | diseases of the lungs and  | 1   | SKI           | with the  | questioning,   |
|---|---|--|---|---------------|---|--|
| 3.641.<br>3.641.<br>3.641.  | of diseases and injuries of the lungs and mediastinum. Radiation research methods. Native X-ray methods. Radiography. Fluorography. Fluoroscopy. General shadow picture of the chest. Special radiopaque techniques. Bronchography. Angiopulmography. Angiopulmography. Pneumomediastinography. Pleurography. Fistulography | mediastinum. Radiation research methods. Native X-ray methods. Radiography. Fluorography. Fluoroscopy. General shadow picture of the chest. Special radiopaque techniques. Bronchography. Angiopulmography. Pneumomediastinograph y. Pleurography. Fistulography | edu.k<br>gedu.k<br>gedu.k<br>gedu.k<br>gedu.k<br>gedu.k | Squ's skills  | provided images, work in small groups   | description of pictures, solving test tasks, solving crosswords  |
| Sking | SIW. X-ray manifestations of chronic pneumonia.   | X-ray manifestations of chronic pneumonia.   | LO 4  | 1/7           | preparation of presentations, drawing up crosswords, test tasks, situational tasks, work with an electronic X-ray - radiological atlas. | protection of presentations, solving crosswords, test tasks, situational tasks, work with an electronic X-ray-radiological atlas |
| 2 Eduk<br>du k  | Lecture. The main radiological symptoms and syndromes of lung diseases  | The main radiological symptoms and syndromes of lung diseases.   | LO 1  | dedi.<br>M.Y. | Overview - illustrative, presentation   | Feedback   |
| 1 SK  | Practical lesson. The main radiological symptoms and syndromes of lung  | The main radiological symptoms and syndromes of lung diseases. Syndrome of   | LO 1  | 3             | discussion, work<br>with the<br>provided<br>pictures, work in   | oral<br>questioning,<br>description of<br>pictures,  |

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Department of Phtiziopulmonology and radiology Syllabus: «Visual diagnostic»

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diseases. Syndrome extensive shading of the pairs solving test of extensive shading pulmonary field. tasks, solving of the pulmonary Limited shading. Round crosswords field. Limited shadow syndrome. Foci and limited focal shading. Round shadow syndrome. dissemination. Foci and limited focal Syndrome of extensive dissemination. focal dissemination. Syndrome of Syndrome of extensive extensive focal enlightenment of the dissemination. pulmonary field. Extensive pulmonary field enlightenment syndrome Μ. SIW (with teacher). Some diagnostic aspects 1/7 preparation of protection of SIW. Some in the X-ray detection of presentations, presentations, diagnostic aspects in abscess and abscess drawing up solving X-ray detection of pneumonia. crosswords, test crosswords, abscess and abscess tasks, situational test tasks, pneumonia. tasks, work with situational an electronic Xtasks, work ray with an radiological atla electronic Xray radiological atlas Lecture. Visual Visual diagnostics of LO 1 Overview -Feedback diagnostics of diseases and injuries of illustrative, diseases and injuries the lungs. Research presentation Feedback of the lungs. methodology. X-ray Research semiotics of lung diseases. Visual methodology. X-ray semiotics of lung diagnostics of diseases. Visual tuberculosis and lung diagnostics of tumors. tuberculosis and lung

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MEDICAL

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AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ ACADEMY AO «Южно-Ка: Department of Phtiziopulmonology and radiology

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| skus<br>isgnik<br>o'kr  | Practical lesson. Radiation diagnosis of coronavirus disease. Organization. Research methods, interpretation of results. Radiation manifestations of a new coronavirus infection. The use of CT of the lungs for COVID-19.                     | Practical lesson. Radiation diagnosis of coronavirus disease. Organization. Research methods, interpretation of results. Radiation manifestations of a new coronavirus infection. The use of CT of the lungs for COVID-19.             | LO1  | 3 km2      | discussion, work<br>with the<br>provided<br>images, work in<br>small groups.  | oral<br>questioning,<br>description of<br>pictures,<br>solving test<br>tasks, solving<br>crosswords                               |
|---|--|--|------|------------|---|---|
| SKUL<br>Wase  | SIW (with teacher). SIW. Information content of radiation methods in the diagnosis of tumors and cysts of the mediastinum.   | Informativeness of radiation methods in the diagnosis of tumors and cysts of the mediastinum.  | LO1  | 1/7        | preparation of presentations, drawing up crosswords, test tasks, situational tasks, work with an electronic X-ray-radiological atlas. | protection of presentations, solving crosswords, test tasks, situational tasks, work with an electronic X-ray-radiological atlas. |
| 4. K. Skill S. Skill | Lecture. Syndromes of urgent conditions of the chest organs with X-ray, CT, MRI, ultrasound diagnostic methods. The choice of an adequate research method for various injuries. Symptoms of damage with X-ray, CT, MRI, UD diagnostic methods. | Syndromes of urgent conditions of the chest organs with X-ray, CT, MRI, ultrasound diagnostic methods. The choice of an adequate research method for various injuries.  Symptoms of damage with X-ray, CT, MRI, UD diagnostic methods. | LO 2 | LAN Skrige | Overview - illustrative, presentation   | Feedback  |
| skus<br>skus<br>sor   | Practical lesson Restricted enlightenment syndrome. Pulmonary pattern change syndrome. Syndrome of changes in the roots of the lungs. Limited enlightenment  | Limited enlightenment<br>syndrome. Syndrome of<br>changes in the<br>pulmonary pattern.<br>Syndrome of changes in<br>the roots of the lungs.  | LO 2 | a edil     | discussion, work<br>with the<br>provided<br>pictures, work in<br>pairs  | oral<br>questioning,<br>description of<br>pictures,<br>solving test<br>tasks, solving<br>crossword                                |

### OŃTÚSTIK-QAZAQSTAN

SOUTH KAZAKHSTAN MEDICAL ACADEMY АО «Южно-Казахстанская медицинская академия»

MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ

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| 13.60<br>13.60<br>13.60 | syndrome. Syndrome of changes in the pulmonary pattern. Syndrome of changes in the roots of the lungs.  | a.edu.kl. skina.edu.kl. skina. | na.edu.k     | 3.edi       | Marky Skulg egn. Ky Skulg egn. | edu.kl skriv  |
|-------------------------|---|--|--------------|-------------|--|---|
| ina.e                   | SIW (with teacher). SIW. Radiation diagnostic methods for pathology of the chest cavity organs  | Radiation diagnostic methods for pathology of the chest cavity organs.   | S. SKU       | 1/7         | preparation of presentations, drawing up crosswords, test tasks, situational tasks, work with an electronic X-ray - radiological atlas   | protection of presentations, solving crosswords, test tasks, situational tasks, work with an electronic X-ray - radiological atlas. |
| 5. 54<br>30.14<br>30.14 | Lecture. Basic principles of ultrasound examination of the heart and Dopplerography of blood vessels, angiography, coronary angiography. CT and MRI of the heart. | The main radiation syndromes of cancer of the lungs and pleura.  | LO 3<br>LO 4 | 1. K.       | Overview -<br>illustrative,<br>presentation  | Feedback  |
| 18. 6d                  | Practical lesson. Radiation diagnostics in therapeutic cardiology. X-ray and X-ray functional diagnostic methods for studying the heart and blood vessels.        | Radiation diagnostics in therapeutic cardiology. X-ray and X-ray functional diagnostic methods for studying the heart and blood vessels.   | LO 2<br>LO 3 | 3<br>011.10 | discussion, work<br>with the<br>provided<br>images, work in<br>small groups.   | oral<br>questioning,<br>description of<br>pictures,<br>solving test<br>tasks, solving<br>crosswords                                 |
| 1 SKUS                  | SIW. Some diagnostic aspects in radiological detection of symptoms of damage to the heart   | Some diagnostic aspects in the X-ray detection of symptoms of heart and pericardial damage.  | LO 2<br>LO 3 | 1/7         | preparation of<br>presentations,<br>drawing up<br>crosswords, test<br>tasks, situational<br>tasks, work with   | protection of<br>presentations,<br>solving<br>crosswords,<br>test tasks,<br>situational   |

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| 1/1/   | and pericardium. Mid-term control  | M.KT Skulgierskingie  | isquik)      | KT KT   | electronic X-ray - radiological atlas .                         | tasks, work with electronic X- ray - radiological atlas                           |
|--|--|---|--------------|---|---|---|
| is is is is in a series of the | Lecture. Basic radiological syndromes of the cardiovascular system.  Basic principles of ultrasound examination of the heart and Dopplerography of blood vessels, angiography, coronary angiography. CT and MRI of the heart | Basic principles of ultrasound examination of the heart and vascular Doppler ultrasonography, angiography, coronary angiography. CT and MRI of the heart.   | LO 2<br>LO 3 | 1.67<br>1.15<br>1.15<br>1.15<br>1.15<br>1.15<br>1.15<br>1.15<br>1.1 | Overview - illustrative, presentation                           | Feedback  |
| The state of the s | Practical lesson. Radiation diagnostics of congenital and acquired heart defects.  | Radiation diagnostics in therapeutic cardiology. X-ray and X-ray functional diagnostic methods for examining the heart and blood vessels. The main radiological syndromes of the cardiovascular system.  Basic principles of ultrasound examination of the heart and vascular Doppler ultrasonography, angiography, coronary angiography, CT and MRI of the heart.  Radiation diagnostics of congenital and acquired heart defects. | LO 3         | 3 St. C.                        | discussion, work with the provided images, work in small groups | oral questioning, description of pictures, solving test tasks, solving crosswords |
| W.   | SIW (with teacher). SIW. SIW. Visual methods for   | Radiation anatomy of<br>the esophagus and<br>gastrointestinal tract   | LO 2<br>LO 3 | 1/7   | preparation of<br>presentations,<br>drawing up                  | . protection of presentations, solving  |

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studying congenital with X-ray, CT, MRI, crosswords, test crosswords, and acquired heart research, research tasks, situational test tasks, defects. methods. tasks, work with situational an electronic Xtasks, work ray with radiological electronic Xatlas ray radiological atlas Lecture. . Imaging methods LO<sub>2</sub> Overview -Feedback (MRI, CT, ultrasound, LO3 Radiation diagnostics illustrative. for diseases of the scintigraphy, presentation gastrointestinal tract. arthroscopy, etc.) of the X-ray semiotics. The pathology of the bone role of ultrasound, and joint system, CT in the diagnosis indications and rules, of pathology of the diagnostic value liver, pancreas, gallbladder and bile ducts. Visual diagnostics of LO 2 discussion, work Practical lesson. oral bone and joint with the questioning. Radiation methods provided description of for diagnosing the pathology. Methods of digestive organs. visual diagnostics in images, work in pictures, small groups. Radiation diagnostics rheumatology. X-ray solving test examination of the joints for diseases of the tasks, solving gastrointestinal tract. and spine, indications crosswords X-ray semiotics. and rules for this study, Basic radiological X-ray (often with the syndromes of the use of artificial contrast) digestive system. The P-signs of arthritis and role of ultrasound, arthrosis, osteomyelitis, P stage of arthritis. CT in the diagnosis of pathology of the Imaging methods (MRI, liver, pancreas, CT, ultrasound, gallbladder and bile scintigraphy, ducts. Differential arthroscopy, etc.) of the diagnosis of pathology of the bone and joint system, pathology of the digestive organs. indications and rules, diagnostic value. SIW (with teacher). LO<sub>2</sub> Normal radial anatomy 1/7 preparation of protection of SIW. Radiation of the liver, research LO 3 presentations, presentations, anatomy of the methods. Syndromes of drawing up solving esophagus and lesion in X-ray, CT, crosswords, test crosswords, gastrointestinal tract MRI, research. tasks, situational test tasks, with X-ray, CT, MRI, tasks, work with situational

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| 1 S. K.L.   | studies, research methods.   | My Sir Skulg | inky<br>inky | 1/1/<br>1/1/<br>1/2/                    | an electronic X-ray -radiological atlas.   | tasks, work with an electronic X- ray - radiological atlas.  |
|---|--|--|--------------|---|--|--|
| 12. 54. 12. 12. 12. 12. 12. 12. 12. 12. 12. 12  | Lecture. Imaging methods (MRI, CT, ultrasound, scintigraphy, arthroscopy, etc.) of pathology of the osteoarticular system, indications and rules, diagnostic value.  | Radiation diagnostics for diseases of the gastrointestinal tract. X-ray semiotics. The role of ultrasound, CT in the diagnosis of pathology of the liver, pancreas, gallbladder and bile ducts.  | LO 2         | 34. 34. 34. 34. 34. 34. 34. 34. 34. 34. | Overview -<br>illustrative,<br>presentation  | Feddback   |
| edu. Kraik<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skriger<br>Skr | Practical lesson. Visual diagnosis of osteoarticular pathology. Methods of visual diagnosis in rheumatology. X-ray examination of joints and spine, indications and rules for conducting this study, X-ray (often using artificial contrast). P-signs of arthritis and arthrosis, osteomyelitis, P stage of arthritis. Imaging methods (MRI, CT, ultrasound, scintigraphy, arthroscopy, etc.) of pathology of the osteoarticular system, indications and rules, diagnostic value | Radiation methods for diagnostics of the digestive system. Radiation diagnostics for diseases of the gastrointestinal tract. X-ray semiotics. The main radiological syndromes of the digestive system. The role of ultrasound, CT in the diagnosis of pathology of the liver, pancreas, gallbladder and bile ducts. Differential diagnosis of the digestive organs.  | LO 3         | 30 Skriger                              | discussion, work with the provided images, work in small groups.   | oral<br>questioning,<br>description of<br>pictures,<br>solving test<br>tasks, solving<br>crosswords    |
| 1 47<br>3 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4   | SIW(with teacher). SIW Basics of the radionuclide method and their application in practice   | Radiation diagnosis of damage to the esophagus and gastrointestinal tract.   | LO 2<br>LO 3 | 1/7                                     | preparation of<br>presentations,<br>drawing up<br>crosswords, test<br>tasks, situational<br>tasks, work with<br>electronic X-ray | protection of<br>presentations,<br>solving<br>crosswords,<br>test tasks,<br>situational<br>tasks, work |

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ACADEMY

**AKADEMIASY** «Оңтүстік Қазақстан медицина академиясы» АҚ

**ACADEMY** AO «Южно-Казахстанская медицинская академия»

Department of Phtiziopulmonology and radiology

044-70/16

Syllabus: «Visual diagnostic»

стр. из 24

| 5.   | Kr. 1. Skulgiegnika  | Mr. St. Skulgier Egn.   | in K         | XX X  | - radiological<br>atlas   | with electronic X- ray - radiological atlas   |
|--|--|---|--------------|---|---|---|
| s. el  | Lecture. Visual diagnosis of endocrine system diseases: CT, MRI, radionuclide studies.   | The role of plain radiography, intravenous excretory urography, pyelography, angiography, ultrasound, CT, MRI, radionuclide renography.   | LO 2         | Kus<br>sg.  | Overview - illustrative, presentation   | Feedback  |
| 1,41,14,15,15,14,15,15,15,15,15,15,15,15,15,15,15,15,15, | Practical lesson. Visual diagnosis of endocrine system diseases. Radiation methods for studying the thyroid and parathyroid glands   | Radiation diagnostic methods in nephrology and urology - the role of plain radiography, intravenous excretory urography, pyelography, angiography, ultrasound, CT, MRI, radionuclide renography. X-ray diagnostics of diseases of the urinary system. Ultrasound diagnostics of pathologies of the urinary system. Methods of radioisotope and radionuclide research in nephrology. | LO 3         | 3<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skrige<br>Skr<br>Skr<br>Skr<br>Skr<br>Skr<br>Skr<br>Skr<br>Skr<br>Skr<br>Skr | discussion, work<br>with the<br>provided<br>images, work in<br>small groups   | oral questioning, discussion of research results, solving situational problems  |
| 10,14,100,000,000,000,000,000,000,000,00   | SIW (with teacher). SIW.  Visual diagnosis of the adrenal glands: computed tomography, MRI, scintigraphy of the adrenal cortex, scintigraphy of the medulla, adrenal glands, positron tomography. Methods of visualization of the hypothalamic-pituitary system: radiodiagnosis, scintigraphy with octreotide. | Visual diagnosis of the adrenal glands: computed tomography, MRI, scintigraphy of the adrenal cortex, scintigraphy of the medulla, adrenal glands, positron tomography. Methods of visualization of the hypothalamic-pituitary system: radiodiagnosis, scintigraphy with octreotide.  | LO 2<br>LO 3 |   | preparation of presentations, drawing up crosswords, test tasks, situational tasks, work with electronic X-ray - radiological atlas | protection of presentations, solving crosswords, test tasks, situational tasks, work with electronic X-ray-radiological atla. |

### OŃTÚSTIK-QAZAQSTAN

MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ

SOUTH KAZAKHSTAN

MEDICAL

ACADEMY

AO «Южно-Казахстанская медицинская академия»

Department of Phtiziopulmonology and radiology Syllabus: «Visual diagnostic»

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| 10°  | Lecture. Radiation diagnostics of diseases of the urinary and reproductive system  | Radiation diagnostics of diseases of the urinary and reproductive system  | LO 3<br>LO 4 | 3/2/<br>3/1/   | Overview -<br>illustrative,<br>presentation  | Feedback  |
|--|--|---|--------------|--|--|---|
| or a sking of the  | Practical lesson. Radiation diagnostic methods in nephrology and urology - the role of survey radiography, intravenous excretory urography, pyelography, angiography, ultrasound, CT, MRI, radionuclide renography. X-ray diagnosis of diseases of the urinary system. Ultrasound diagnosis of pathologies of the urinary system. Methods of radioisotope and radionuclide research in nephrology. | Radiation diagnostic methods in nephrology and urology - the role of survey radiography, intravenous excretory urography, pyelography, angiography, ultrasound, CT, MRI, radionuclide renography. X-ray diagnosis of diseases of the urinary system. Ultrasound diagnosis of pathologies of the urinary system. Methods of radioisotope and radionuclide research in nephrology | LO 2         | Skus<br>Skus<br>Skus<br>Skus<br>Skus<br>Skus<br>Skus<br>Skus | discussion, work with the provided images, work in small groups.   | oral<br>questioning,<br>description of<br>pictures,<br>solving test<br>tasks, solving<br>crosswords                               |
| ig equivision in a series of the series of t | SIW (with teacher). SIW. Radiation diagnostics in urology and gynecology  Border control   | Radiation diagnostics in urology and gynecology   | L Sky        | 2/6  | preparation of presentations, drawing up crosswords, test tasks, situational tasks, work with an electronic X-ray-radiological atlas | . protection of presentations, solving crosswords, test tasks, situational tasks, work with electronic X-ray - radiological atlas |
| 9.   | Teaching and Teachi  | ng Methods  | 1 3          | 71   | 3. 300 . K   | 2,11110   |
| 9.1  |  | Overview – illustrative   | A J          | 1/1  | 1, 3, 29p. A   | J 36 140  |
| 9.2  |  | Discussion, work with the p questioning, discussion of re   |              |  |  |   |
| 9.3  | SRO.SROP   | Shares opinions, discuss and  | l evaluat    | e  | St. Wo Go  | 1011  |

# OŃTÚSTIK-QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ Department of Phtiziopulmonology and radiology Syllabus: «Vısual dıagnostıc» SOUTH KAZAKHSTAN MEDICAL ACADEMY AO «Южно-Казахстанская медицинская академия» 044-70/16 стр. из 24

| 91 101  | ol Testing, situational  | problem solving and  | oral questioning   |
|---|--|--|--|
| 10. Evaluation crit   | eria   | va seg du K  | 1 skilma sieddiik KT   |
| Alphabetic grade  | The digital  | Percentage   | Assessment according to the  |
| 10. 11. ch  | equivalent of points   | . K. 3. og   | traditional system   |
| e A   | 4,0  | 95-100   | GOOD   |
| A   | 3,67   | 90-94  | S. M. 15 34 40 8   |
| B+0   | 3,33   | 85-89  | FINE   |
| B   | 3,0  | 80-84  | Jr. 5 17. 15 34. 43  |
| B -   | 92,67  | 75-79  | 20, 60 Mill 1 9th,   |
| 2, C+   | 2,33   | 70-74  | A 10. 60 11 1 1  |
| C   | 2,0  | 65-69  | 4. V3. 60, 11/4 1 2.   |
| KI C-51-100   | 1,67   | 60-64  | Satisfactorily   |
| D+ 5  | 1,33   | 55-59  | 1 3 KU, 3. 30 M  |
| D-1 6   | 1,0  | 50-54  | 1 2. My 30 90.   |
| FX  | 0,5  | 25-49  | Unsatisfactory   |
| F   | M. 3. 00 K   | 0-24   | 712. KT 24 W. C.   |
| to: databases, animatio<br>simulators, professiona  | on • Республиканска http://rmebrk.kz   | я межвузовская э<br><u>/</u>   | tps://e-lib.skma.edu.kz/genres лектронная библиотека (РМЭБ)  |
| to: databases, animatic<br>simulators, professiona<br>blogs, websites, other<br>electronic reference<br>materials (for example  | <ul> <li>Pecпубликанска <a href="http://rmebrk.kz">http://rmebrk.kz</a></li> <li>Цифровая библи</li> <li>Электронная би</li> <li>Эпиграф - порта</li> <li>ЭБС IPR SMART 1</li> <li>информационно</li> <li>Cochrane Library</li> </ul>  | я межвузовская э // мотека «Aknurpress» - блиотека «Эпиграф» ил мультимедийных у attps://www.iprbookshправовая система «З                    | лектронная библиотека (РМЭБ)  https://www.aknurpress.kz/ - http://www.elib.kz/ гчебников https://mbook.kz/ru/index op.ru/auth Ван» - https://zan.kz/ru                                 |
| including, but not limit to: databases, animatic simulators, professional blogs, websites, other electronic reference materials (for example video, audio, digests)  Electronic textbooks | <ul> <li>Pecпубликанска <a href="http://rmebrk.kz">http://rmebrk.kz</a></li> <li>Цифровая библи</li> <li>Электронная би</li> <li>Эпиграф - порта</li> <li>ЭБС IPR SMART I</li> <li>информационно</li> <li>Cochrane Library</li> <li><a href="https://www.coc.gov/decta/wstv">https://www.coc.gov/decta/wstv</a></li> </ul> | я межвузовская э<br>//<br>нотека «Aknurpress» -<br>блиотека «Эпиграф»<br>пл мультимедийных у<br>https://www.iprbooksh<br>правовая система «З | лектронная библиотека (РМЭБ)  https://www.aknurpress.kz/ - http://www.elib.kz/ гчебников https://mbook.kz/ru/index op.ru/auth Ван» - https://zan.kz/ru os://www.youtube.com/channel/UC |

# OŃTÚSTIK-QAZAQSTAN MEDISINA AKADEMIASY «Оңтүстік Қазақстан медицина академиясы» АҚ Department of Phtiziopulmonology and radiology Syllabus: «Vısual dıagnostıc» SOUTH KAZAKHSTAN MEDICAL ACADEMY AO «Южно-Казахстанская медицинская академия» 044-70/16 стр. из 24

| Laboratory phy  | vsical        | " " " So " 17. 1 - 46 " " SO " 1' 1 - 3" The  |  |  |
|---|---------------|---|--|--|
| resources   | 2.60 M. M     | 24 W. S. M. V.  |  |  |
| Special progra  | ms            | 24 Vs. 60 1116 1 3 At. Vs. 90 1 At. 2.  |  |  |
| Magazines (ele  | ectronic      | T 34, 39, 60, 114, 1 3, 11, 31, 39, 14  |  |  |
| magazines)  | ch. vs. 600"1 | in 1 2 Miles 30, 90, Mr. 2, My 3 in 40. M   |  |  |
| Literature  main: 1 2000. F Getting Jane Cr additio Radiolo                     |               | Medical radiology - Lindenbraten L.D, Koroluk I.P year of release Radiation therapy — Trufanov G.E, year of release 2010.  Started in Clinical Radiology — George W. Eastman. Christoph Wald cossin  onal: sites — 24radiology.ru, Learning Radiology, Geeky Medics ogy Tutorials, Radiology Cafe. aedia.org. |  |  |
| 12. Discipli  | ne policy     | 56, 35. 60, 14, 2, 16, 3; 40, 15, 2,  |  |  |
| Requirements you make to students   |               | Penalty and incentive measures  |  |  |
| It is not allowed to skip classes without a valid reason.                       |               | If a practical lesson is missed without a good reason, an NB is given, if a lecture is missed without a good reason, the assessment of the midterm control is reduced - 1 point for each missed lecture.  |  |  |
| Timely work off missed classes for a good reason.                               |               | Working off a missed lesson for a good reason is carried out only with the permission of the dean's office (work sheet).  |  |  |
| Attendance at classes and lectures on time.                                     |               | If the student is late for more than 5 minutes, he will not be admitted to the lesson. Nb is exhibited in the educational journal and lecture journal.  |  |  |
| The student must have an appropriate outfit (robe, cap, changeable shoes, etc.) |               | If the form is inappropriate, the student is not allowed to the lesson or lecture, in the educational journal or lecture journal is exhibited by the NB   |  |  |
| The student has a medical sanitary book   |               | Without a health book, a student is not allowed into the clinic's departments, the nb is displayed in the educational journal   |  |  |
| Srop  |               | If you miss the SRO without a valid reason, the mark for the SRO decreases - 2 points for each missed lesson  |  |  |
| Timely fulfillment of tasks for SRO.  |               | The assessment of the SRO is set in the SRO classes according to the schedule in the educational journal of progress and the electronic journal, taking into account the penalty points, are subtracted from the assessments of the SRO.  |  |  |
| The student must treat teachers and fellow students with respect                |               | . In case of disrespectful student behavior, the student's behavior discussed at the cathedral meeting, this is reported to the dean's office and parents   |  |  |
| Careful attitude of students to the property of the department                  |               | When the property of the department is destroyed, the student restores the property on his own.   |  |  |
| Mid-term control  |               | The midterm control of students' knowledge is carried out at least twice during one academic period on 8/15 weeks of theoretical  |  |  |

Department of Phtiziopulmonology and radiology

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| r s. churs is agn. 141          | training with putting down the results of midterm controls in the  |
|---------------------------------|--|
| 12 3KI 23. 801 11.K             | academic journal of progress and electronic journal, taking into account penalty points for missing lectures (missed lectures in the |
| 7.4 1 34, 28. 60, 11.           | form of penalty points are deducted from the assessments midterm   |
| 47. KT 2/2, Wa. 600"            | control). a student who does not show up for midterm control   |
| S. M. 15 ch. 39. 60             | without a valid reason is not allowed to take the discipline exam.   |
| 60,11,611 341, 23.              | A student who does not appear for midterm control for a good   |
| 13. 600 11 Km 1 2 KW, 3         | reason, immediately after starting classes, submits an application to  |
| 1, 39. 600 11 K 2 21 KUL        | the dean, provides supporting documents (due to illness, family  |
| TI, 3. 90 Th 2, 12              | circumstances or other objective reasons), receives a work sheet,  |
| 2, Kur 3'0 90. Kr 26            | which is valid for the term specified in clause 12.4. The results of   |
| 1 2 churs egn. 141              | midterm control are provided to the dean's office in the form of a report by the end of the control week.                            |
| 17 34, US. 600 11/4             | A student who does not score a passing score (50%) in one of the   |
| Assessment of the final control | types of control (current control, midterm control No. 1 and / or  |
| , 41. KT 3K, War 600            | No. 2) is not allowed to take the exam in the discipline.  |

#### 13. Academic policy based on the moral and ethical values of the academy

Academic policy. Clause 4 Code of honor of the student

The student of the Academy is a patriot of the Republic of Kazakhstan, highly respects the flag, coat of arms, anthem, the state language - the main attributes of sovereign Kazakhstan. The student treats with care and preserves the glorious traditions, moral values of the previous generation of the Academy.

The student is disciplined, polite, sociable, observes generally accepted moral and ethical norms of behavior in public places and in everyday life, is self-critical and demanding of himself and his actions.

The student condemns and actively promotes rejection and opposition to any manifestations of corruption, corrupt worldview and behavior in the Academy among students and teachers

Discipline Grading Policy

Current control: testing, assessment of solving situational problems, discussion assessment sheet, assessment sheet of work in small groups, round table assessment sheet, diagnostic algorithm and treatment regimens

Midterm control: Testing. Controlling the assimilation of practical skills.

Mid-term control of students' knowledge is carried out at least twice during one academic period on 7/12 days of theoretical training with the completion of midterm examinations in the educational progress journal and electronic journal, taking into account penalty points for missing lectures (lectures are skipped in the form of penalty points from the assessments of the intermediate control).

- the penalty point for missing one lecture without a valid reason is 1.0 point;
- a student who does not show up for midterm control without a valid reason is not allowed to take the discipline exam. A student who does not appear for midterm control for a good reason, immediately after starting classes, submits an application to the dean, provides supporting documents (due to illness, family circumstances or other objective reasons), receives a work sheet, which is valid for the term specified in clause 12.4. The results of midterm control are provided to the dean's office in the form of a report by the end of the control week.
- The assessment of the SRO is set in the classroom of the SRO according to the schedule in the educational journal of progress and the electronic journal, taking into account the penalty points, are subtracted from the assessments of the SRO).

MEDICAL ACADEMY

«Оңтүстік Қазақстан медицина академиясы» АҚ 💛 АО «Южно-Казахстанская медицинская академия:

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- if you miss one lesson of the SSSP a penalty point of 2.0;
- A student who does not score a passing score (50%) in one of the types of control (current control, midterm control No. 1 and / or No. 2) is not allowed to take the exam in the discipline.
- The examination score is set based on the results of the current and midterm controls the assessment of the admission rating (ORD) (60%) and the final control the marks on the exam (40%).
- ORD (assessment of the rating of admission) is determined as the average value of points for practical training, SRO, and midterm control.
- A student who scored a minimum score of the ORD equal to 1 (15%) and above is allowed to take the exam.

Final control: exam including OSKE and testing.

| 14. Approval, approval ar                                 | d revision                          | Kung's egn K                          | Sking geduit |
|---|-------------------------------------|---------------------------------------|--------------|
| Date of agreement with the Library and Information Center | Protocol No. 9                      | Head of BIC<br>Darbicheva R.I.        | Call         |
| Date of approval by the department                        | Protocol No. <u>14</u> 13. 06. 2024 | Head of the department Kasaeva L.T    | elutors of   |
| Date of approval for AK OP                                | Protocol No.11<br>14.06.24          | Chairman of the CPC<br>Kalmenov N.Zh. | (Ku)         |