AL-FARABI KAZAKH NATIONAL UNIVERSITY

Higher School of Medicine
Department of Fundamental Medicine

AFFIRM
Dean of the Faculty
_____ (signature)
Kalmatayeva Z.A.
"_____" _____ 2020

EDUCATIONAL AND METHODICAL COMPLEX OF DISCIPLINE

OACh1201"The Human Body (Medical terminology include)"

Specialty "B086"
Educational program “General medicine”

Course – 1
Semester – 1
Number of credits – 4

Almaty 2020

Educational and methodical complex of discipline was compiled by Sarsenova L.K. ., candidate of biological sciences, Aubekerova A.

A., PhD of Biophysics, Marina Nyu, master of medical sciences, Zhibek Oralkhan, master of medical sciences, Gulzhan Kassenova, master of medical sciences, Yespolayeva A. master of biological sciences.

Based on the working curriculum in the specialty B086 General medicine

Considered and recommended at a meeting of the department fundamental medicine
from "___" _____ 2020, protocol No. ...

Head of the department _____ Sarsenova L.K.
(signature)

Recommended by the faculty methodical bureau
"____" _____ 2020, protocol No.

Chairman of the method bureau of the faculty _____ Ualiyeva A. Y.

Al-Farabi Kazakh National University
Higher School of Medicine
Department of Fundamental Medicine

SYLLABUS
Spring semester, academic year 2020-2021

Academic course information

Discipline's code	**Discipline's title**	**Type**	**No. of hours per week**		**Number of credits**		**ECTS**
			Lect.	Pract.			
OACh1201	The Human Body (Medical terminology include)	BD UC	2	2	2	2	4
Lecturer, e-mail, contact number	Marina Nyu, master of Medical Sciences nyu.marina@med-kaznu.com 87074043181 Mulkibaeva Sholpan, Candidate of Medical Sciences mulkibayeva.sholpan@med-kaznu.com Нуртаева Галия Кадырхановна, PhD nurtayeva.galyia@med-kaznu.com 87014579108						

Teacher of Histology, e-mail, contact number	Mulkibaeva Sholpan, Candidate of Medical Sciences mulkibayeva.sholpan@med-kaznu.com	**Office hours**	According to schedule

	87073053507 Есполаева Айкерим Рыскуловна yespolayeva.aikerim@med-kaznu.co m 87013488207		
Teacher of Anatomy and Physiology, e-mail, contact number	Marina Nyu, master of Medical Sciences nyu.marina@med-kaznu.com 87074043181 Айдарбекова Жұлдыз Сейітжаппарқызы aidarbekova.zhuldyz@med-kaznu.com 87472416822 Тастанбекова Айдана Рахымбердыкызы tastanbekova.aidana@med-kaznu.com 87075590229 Айдашева Балжан Бахытовна aidasheva.balzhan@med-kaznu.co m 87019898509 Хасанова Альмира Шухратовна khassanova.almira@med-kaznu.co m 87075551599		
Assistant of Biophysics	Нуртаева Галия Кадырхановна nurtayeva.galyia@med-kaznu.co m 87014579108 Серикболова Альбина Аскаровна serikbolova.albina@med-kaznu.co m 87477041743	**Office hours**	According to schedule

Academic presentation of the course	During the study of course, students should be competent in: - to form knowledge about the typical normal structure of the human body, understanding the function of organs and body systems based on the application of the principles of bioengineering, to form knowledge about medical terminology - anatomical, pharmacological, clinical This course is an introduction to human anatomy, physiology and histology from an integrative point of view. In the course of studying the course, to form students' abilities: 1) describe and determine the general plan of the structure of the human body; 2) describe and localize the bones of the trunk, skull and limbs, taking into account age, gender and individual characteristics; 3) describe and localize the joints of the bones of the trunk, head and limbs, their structure and movements in them, taking into account age, gender and individual characteristics; 4) describe and localize muscles, places of their beginning and attachment, function taking into account age, gender and individual characteristics; 5) to find and show the anatomical structures of their musculoskeletal system on the image, model and preparation, medical imaging materials (taking into account age-related characteristics), call them, including in Latin; 6) find and palpate bone and muscle landmarks on a living person; 7) apply the basics of medical international terminology - anatomical, and clinical; 8) integrate knowledge of anatomy, physiology, histology and medical biophysics to explain the main phenomena of important medical value; 9) independently find, analyze and summarize educational and scientific information in relation to situations related to the course content; 10) work in a team, defend your point of view reasonably, consider the opinions of others, provide and receive feedback correctly using interpersonal and group communication skills 11) recognize the importance and observe ethical principles, demonstrate responsibility and honesty in all educational interactions; The course gives students a basic understanding of the location, structure and function of the integumentary, skeletal systems from the cell level to the level of the body and gives a broad overview of the relationship between the basic concepts in general biology (including cell transport, biochemistry and metabolism) and complex body processes. Studying the structure and function of the human body also provides for the development of the basics of medical terminology, namely: technology for constructing medical terms and determining their meaning. The principles of biophysics are examined in the clinical context, as well as at the cellular level, then this knowledge is integrated into a single system. The concepts of anatomy, histology, biophysics and physiology are illustrated by medical examples to engage students in

	analytical thinking and stimulate independent as well as joint work on educational material.

Prerequisites	-
Post requisites	**OMiF1214** ”Morphology and physiology of human body”

Information resources	**Basic literature**: 1. Saladin, Kenneth S: Anatomy & Physiology. The Unity of Form and Function (2016, McGraw-Hill Education) на англ. яз. 2. Costanzo, Linda S.: BRS Physiology. Board Review Series.7 edition. -Wolters Kluwer Health, 2018.- 307p. - ISBN 1496367693, 9781496367693 3. Leslie P. Gartner: Color Atlas and Text of Histology. - 7th Edition. - Wolters Kluwer, 2017. ISBN 1496346734, 9781496346735 4. Russell K. Hobbie, Bradley J. Roth: Intermediate Physics for Medicine and Biology. - Springer, 2015. - ISBN 3319126822, 9783319126821 5. Andersson D, Medical Terminology: The Best and Most Effective Way to Memorize, Pronounce and Understand Medical Terms: Second Edition, ISBN-13 : 978-1519066626, 2016 **Additional literature:** 6. Standring, Susan: Gray's Anatomy: The Anatomical Basis of Clinical Practice. - 41 Elsevier Limited, 2016 7. Elaine N. Marieb, Lori A. Smith: Human Anatomy & Physiology Laboratory Manual, Main Version. - 11 edition. - Pearson Education,2015. - ISBN 9780133999143 8. Scanlon V. C, Essentials of Anatomy and Physiology 8th Edition, F.A. Davis Company, 2018 9. Victor P. Eroschenko, Atlas of Histology with Functional Correlations 13th Edition, LWW, 2017 10. William Bialek: Biophysics: Searching for Principles. -Princeton University Press, 2012. - ISBN 0691138915, 9780691138916 Online resources: 1. https://app.lecturio.com/#/ 2. https://3d4medical.com/ 3. https://www.youtube.com/channel/UCc_I2c2bUtO0p4DVeo6-Kxg 4. https://sites.google.com/a/umich.edu/bluelink/curricula/anatomy-403?authuser=0 5. https://histologyknmu.wixsite.com/info/gistologicheskie-sajty 6. https://histologyknmu.wixsite.com/info/gistologicheskie-sajty 7. http://www.histology-world.com/contents/contents.htm 8. http://www.histologyguide.com/slidebox/02-epithelium.html 9. https://histology.medicine.umich.edu/resources 10. https://web.duke.edu/histology/

	11. http://virtualslides.med.umich.edu/Histology/view.apml?listview=1&
Academic policy of the course in the context of university moral and ethical values	*Academic honesty* We adhere to the principle of intolerance to violations of academic integrity. Academic dishonesty includes plagiarism, fraud, falsification, unauthorized cooperation, the use of cheat sheets during exams and classroom work and other forms. A student found guilty of any form of academic dishonesty will receive an unsatisfactory grade (F). *Tolerance and non-discrimination* We have zero tolerance for unsafe behavior during seminars and / or additional research activities, discrimination on ethnicity, gender and other grounds. *Attendance policy* Attending lectures and seminars is a must. At least 50% of attendance is required. In the case of missing more than 50% of the classes, the student automatically receives for discipline (F) and remains on the repeated passage of the discipline (recycle) on a paid or free (if there is a good reason for missing) basis. If you are late for classes for more than 5 minutes without a good reason, the student can attend the lesson, but gets 0 points for this lesson. *Activity in the classroom* All students must participate in group and individual assignments and discussions. The course involves solving cases in the classroom or outside the classroom as an indispensable part of the training. Additional research is not required, but very useful for a better understanding of the course. *Passes of midterm controls and exams* Students can retake the intermediate controls with an official certificate approved by the Keremet doctor. Failure to appear at the final control (exam) is made out in accordance with the rules of the academic policy of the university. *Deadline for assignment* Tasks, projects, reports, etc., not delivered on time without explanation, are not accepted. *Appeal policy* Students can appeal teacher decisions directly with the teacher. If no solution is found, turn to the head of the department for advice. *Appearance and dress code* You need to come to classes in neat clothes in white medical gowns. In the absence of a dressing gown, the teacher has the right to prevent him from taking classes. *Electronic resources* Students are expected to regularly check their email for updates and course announcements.

Evaluation and attestation policy	**Criteria assessment**: assessment of learning outcomes in relation to descriptors, verification of the formation of competencies (learning outcomes specified in the goal) is carried out by the following methods: 1) testing using video, drawings, photographs, diagrams, microphotographs or OSPE using dummies and micropreparations - as part of the current / midterm / final control: final results No 1-5,7,8; 2) solution of situational problems, analysis of cases - within the framework of the current / midterm / final control - final results № 1-9; 3) interview / oral interview - within the framework of the current / milestone / final control - final results № 1-9; 4) assessment by direct observation in the framework of current control and CDS - final results №6, 10, 11; **Summary assessment:** In the course, 3 midterm controls are planned, within the framework of which the development of the material of one section is evaluated. For the semester, admission rating points are set: RD = (RK1 + MT (Mid-Term) + RK2) / 3, where RK1 / RK2 / MT = the sum of all points for classes + points for overseas control and CPC of the corresponding period. RK1 - 1-5 weeks, MT - 6-10 weeks, RK2 - 11-15 weeks. The final control (exam) is carried out in 2 stages. The first stage is testing or SSPE (50%), the second stage is an oral survey of tickets or written exam (50%). The final grade for the discipline = RD * 0.6 + Exam * 0.4

Calendar (schedule) of the implementation of the course content -

Week	Lesson	Topic title (lectures, practical classes, Independent work of students)	Number of hours	Maximum score
1	1	**Lecture 1** **Tissue of Human body I-II** Human tissue.The main classes of classification of adult tissue. Germ layers of human tissues. The structure and location of epithelial tissue, connective tissue, muscle tissue, nervous tissue. Epithelial tissue, connective tissue, muscle tissue, nerve tissue, three germinal germ layers. Three-dimensional shape of the structure, two-dimensional section of the tissue	2	

1	**2**	**Practical Lesson 1** **Tissue of Human body I-II**	2	10

		Human tissue.The main classes of classification of adult tissue. Germ layers of human tissues. The structure and location of epithelial tissue, connective tissue, muscle tissue, nervous tissue. Epithelial tissue, connective tissue, muscle tissue, nerve tissue, three germinal germ layers. Three-dimensional shape of the structure, two-dimensional section of the tissue		
2	**3**	**Practical Lesson 2** **Tissue of Human body III** Epithelial tissue. Types of epithelium, their differences from each other. The structure of the epidermis, dermis and subcutaneous tissue. Types of sweat glands, sebaceous and ceruminous glands, their structure. Skin functions. Histology of the hair and its follicle. Hair types. The most common forms of skin cancer.	2	10
2	**4**	**Lecture 2** **Medical terminology. Organization of the body I-III** The Language of Medicine. Anatomical Position. Anatomical Planes. Directional Terms. Major Body Regions (Axial and Appendicular Region). Body Cavities and Membranes. Organ Systems.	2	
3	**5**	**Practical Lesson 3** **Medical terminology. Organization of the body I** The Language of Medicine. Anatomical Position. Anatomical Planes. Directional Terms. Major Body Regions (Axial and Appendicular Region). Body Cavities and Membranes. Organ Systems.	2	10
3	**6**	**Lecture 3** **Organization of the body II.** The Scope of Anatomy Physiology. Human Structure**.** Human Function.	2	
4	**7**	**Lecture 4** **The integumentary system I-II** Structure and functions of the skin. Dermal circulation. Structure and functions of the Cutaneous Glands. Skin Disorders	2	

4	**8**	**Practical Lesson 4** **Organization of the body II. The integumentary system I-II** The Scope of Anatomy Physiology. Human Structure**.** Human Function. Structure and functions of the skin. Dermal circulation. Structure and functions of the Cutaneous Glands. Skin Disorders	2	10

4		**Independent work of the student with the teacher – discussion of progress of Independent work of the student#1**		
5	**9**	**Practical Lesson 5 CC1**	2	60
5	**10**	**Lecture 5** **Medical imaging I-II** X-ray imaging. Positron Emission Tomography. Computed Tomography. Magnetic Resonance Imaging. Ultrasonography	2	
MT I				**100**
6	**11**	**Practical Lesson 6** **Medical imaging I-II** X-ray imaging. Positron Emission Tomography. Computed Tomography. Magnetic Resonance Imaging. Ultrasonography	2	10
6	**12**	**Lecture 6** **Human Tissue IV-V** Connective Tissue. Tissues and Organs of the Skeletal System. Histology of Osseous Tissue	2	
7	**13**	**Practical Lesson 7** **Human Tissue IV-V** Connective Tissue. Tissues and Organs of the Skeletal System. Histology of Osseous Tissue	2	10

7	**14**	**Lecture 7** **The skeletal system I** - Bone Development	2	
8	**15**	**Lecture 8** **The skeletal system II** Physiology of Osseous Tissue	2	
7		**Independent work of the student with the teacher – discussion of progress of Independent work of the student#1**	4	

8	**16**	**Lecture 9** **The skeletal system II** Bone Disorders	2	
8	**17**	**Practical Lesson 8** **The skeletal system I-III** -Bone Development. Physiology of Osseous Tissue. Bone Disorders	2	10
9		**Independent work of the student with the teacher – discussion of progress of Independent work of the student#1**	4	
9	**18**	**Practical Lesson 9 CC 2**	2	60
10	**19**	**Lecture 10** **The skeletal system IV** - Cranial Bones. Facial Bones	2	
10	**20**	**Practical Lesson 10** **The skeletal system IV** Cranial Bones. Facial Bones	2	10

		Mid-Term		100
11	**21**	**Lecture 11** **The skeletal system V** - General Features of the Vertebral Column. General Structure of a Vertebra. Intervertebral Discs. Regional Characteristics of Vertebrae. Thoracic Cage.	2	
11	**22**	**Practical Lesson 11** **The skeletal system V** General Features of the Vertebral Column. General Structure of a Vertebra. Intervertebral Discs. Regional Characteristics of Vertebrae. Thoracic Cage.	2	10
12	**23**	**Lecture 12** **The skeletal system VI** The Shoulder Girdle. The Upper Limb	2	

12	**24**	**Practical Lesson 12** **The skeletal systemVI** The Shoulder Girdle. The Upper Limb	2	10
12		**Independent work of the student with the teacher – discussion of progress of Independent work of the student#1**	4	
13	**25**	**Lecture 13** **The skeletal system VII** The Pelvic Girdle. The Lower Limb	2	
13	**26**	**Practical Lesson 13** **The skeletal system VII** The Pelvic Girdle. The Lower Limb	2	10

14	**27**	**Lecture 14** **Joint I** Joints and Their Classification.	2	
		Independent work of the student with the teacher – presentation of Independent work of the student#1	4	10
14	**28**	**Lecture 15** **Joint II** Anatomy and physiology of individual joints	2	
15	**29**	**Practical Lesson 14** Joints and Their Classification. Anatomy and physiology of individual joints **Recap: capstone case**	2	10
15	**30**	**Practical Lesson 15 CC 3**	2	50
MT 2				**100**

Head of the department _____ Sarsenova L. K.

Chairman of the method bureau of the faculty _____ Ualiyeva A. E.