FEDERAL STATE BUDGET EDUCATIONAL INSTITUTION OF HIGHER EDUCATION "ROSTOV STATE MEDICAL UNIVERSITY" MINISTRY OF HEALTH OF THE RUSSIAN FEDERATION

Faculty of Education of foreign students, residents and postgraduates

CONFIRM
Supervisor educational program
_____ / E.S. Belousova /
(signature) *(FULL NAME.)*
"___" _____ 20_21

DISCIPLINE WORKING PROGRAM

HISTOLOGY, EMBRYOLOGY, CYTOLOGY

Speciality 31.05.01 General medicine

Form of education full-time

Rostov-on-Don
2020

I. GOALS AND OBJECTIVES OF MASTERING THE DISCIPLINE

Goalsmastering the discipline: mastering the discipline the embodiment of the morphofunctional approach to the study of the development, structure and significance of cells and intracellular structures, tissues, organs and systems of the human body.

Tasks:specialized lectures and practical classes in cytology, embryology, general and special histology, taking into account age and clinical orientation.

II. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

The process of studying the discipline is aimed at developing the following competencies in accordance with the Federal State Educational Standard of Higher Education and the EP of Higher Education in this specialty:

a) general professional (GPC):readiness to use basic physical, chemical, mathematical and other natural science concepts and methods in solving professional problems (GPC-7); the ability to assess morphofunctional, physiological states and pathological processes in the human body to solve professional problems (OPK-9);

b) professional (PC):readiness to collect and analyze the patient's complaints, his medical history, examination results, laboratory, instrumental, pathological, anatomical and other studies in order to recognize the condition or establish the presence or absence of the disease (PC-5).

III. THE PLACE OF DISCIPLINE IN THE STRUCTURE OF EP VO

2.1. The academic discipline is basic.

2.2. The formation of the above competencies is facilitated by the study of the following previous disciplines:

- biology;
- human anatomy.

2.3. The discipline (name) creates the prerequisites for the formation of the specified competencies by the disciplines:

-normal physiology;
- pathological anatomy;
- pathological physiology;
- propaedeutics of internal diseases.

IV. CONTENT AND STRUCTURE OF DISCIPLINE

Labor intensity of the discipline in section 8, hour 288

4.1. Sections of the discipline studied in the 2nd and 3rd semester(s)

No. section a	Namesection	Number of hours					
		Total	ContactJob				SRS
			L	WITH	ETC	LR	
Semester 2							
1	Cytology	16	2		6		16
2	Embryology	5	0		3		5
3	General histology	44	8		18		34
4	Private histology	47	6		21		25
Total for the semester		144	16		48		80
Interim certification form (test/test with assessment/exam)							
Semester 3							
5	Private histology	98	14		45		39
6	Embryology person	10	2		3		5
Total for the semester		108	16		48		44
Interim certification form (test/test with assessment/exam)		36					
Total for the discipline:		288	32		96		124

SRS- independent work of students
L- lectures

WITH– seminars (in accordance with the RUP)

LR –laboratory work (in accordance with the RUP)

ETC– practical exercises (in accordance with the RUP, they include clinical practical exercises)

4.2. Independent work under the supervision of a teacher

Lectures

Section number	**No.** lectures	**Lecture topics**	**Number of hours**
Semester 2			
1	1	Cytology.	2
3	2	Epithelial tissues. Blood and lymph.	2
	3	***Connective tissues.***	2
	4	***Skeletal tissues.***	2
	5	Muscle tissue.	2
4	6	Tissue elements of the nervous system.	2
	7	Nervous system.	2
	8	Sense organs.	2
Total for the semester		16	
Semester 3			
4			1
	1	The cardiovascular system.	2
	2	System of hematopoietic organs and immune defense.	2
	3	Endocrine system.	2
	4	Digestive system.	2
	5	Digestive system.	2
	6	Excretory system.	2
	7	Female reproductive system. Male reproductive system.	2
	8	Human embryology.	2
Total for the semester		16	
Total hours discipline:		32	

Practical lessons

Section number	No. PR	Practical topics	Number of hours	Shapes of the current control
Semester 2				
1	1	Introduction to the course of histology. Cytology.	3	Test control, interview
	2	Cytogenesis	3	Test control, interview
2	3	Basics of general embryology	3	Test control, interview
5	4	Epithelial tissues. Glands	3	Test control, interview
	5	Blood and lymph	3	Test control, interview
	6	***Connective tissues***	3	Test control, interview
	7	***Connective tissues. Concept of inflammation***	3	Test control, interview
	8	***Skeletal tissues. Cartilage***	3	Test control, interview
	9	***Skeletal tissues. Bone***	3	Test control, interview
	10	Muscle tissue	3	Test control, interview
	eleven	Muscle tissue	3	Test control, interview
	12	Tissue elements of the nervous system	3	Test control, interview
4	13	Nervous system	3	Test control, interview
	14	Nervous system	3	Test control, interview

Section number	No. PR	Practical topics	Number of hours	Shapes of the current control
	15	Sense organs	3	Test control, interview
	16	Sense organs	3	Test control, interview
Total hours per semester			48	
Semester 3				
4	1	The cardiovascular system	3	Testing, interview
	2	The cardiovascular system	3	Testing, interview
	3	Hematopoietic organs and immune defense	3	Testing, interview
	4	Hematopoietic organs and immune defense	3	Testing, interview
	5	Endocrine glands (central department)	3	Testing, interview
	6	Endocrine glands (peripheral section)	3	Testing, interview
	7	Digestive system	3	Testing, interview
	8	Digestive system	3	Testing, interview
	9	Digestive system	3	Testing, interview
	10	Excretory system	3	Testing, interview
	eleven	Female reproductive system	3	Testing, interview
	12	Female reproductive system	3	Testing, interview
	13	Male reproductive system	3	Testing, interview
	14	Respiratory system	3	Testing, interview
	15	Skin system	3	Testing, interview
	16	Human embryology	3	Testing, interview
Total for the semester hours			48	
Total hours discipline:			96	

4.3. Independent work of students

Section number	Type of independent work of students	Quantity hours	Forms of current control
Semester 2			
	Cytology, cytogenesis	16	Essay
2	Basics of general embryology	5	Essay
3	Epithelial tissues. Glands	6	Essay
	Blood and lymph	6	Essay
	Connective tissues. Concept of inflammation	8	Essay
	Skeletal tissues. Cartilage	5	Essay
	Skeletal tissues. Bone	6	Essay
	Muscle tissue	3	Essay
	Tissue elements of the nervous system	5	Essay
4	Nervous system	10	Essay
	Sense organs	10	Essay
Total hours per semester		80	
Semester 3			
	The cardiovascular system	6	Essay
	Organs of hematopoiesis and immune defense	6	Essay
	Endocrine glands	6	Essay
	Digestive system	4	Essay
	Excretory system	4	Essay
	Female reproductive system	6	Essay
	Male reproductive system	2	Essay
	Respiratory system	4	Essay
	Skin system	4	Essay
	Human embryology	2	Essay
Total hours per semester		44	
Total discipline hours:		124	

V. ASSESSMENT FUND FOR CURRENT CONTROL AND INTERMEDIATE CERTIFICATION

The fund of assessment tools for determining the level of development of competencies as a result of mastering the discipline is an appendix to the work program.

VI. EDUCATIONAL AND METHODOLOGICAL SECURITYDISCIPLINES

6.1. Main literature.

1. Histology, embryology, cytology: textbook: [rec. GBOU VPO "First Moscow State Medical University named after I.M. Sechenov"] for university students. Col.: Yu.I.Afanasyev, N.A. Yurina, B.V. Aleshin et al.; ed. Yu.I. Afanasyeva, N.A. Yurina. - 6th edition, revised. and additional – M.: GEOTAR-Media, 2014. - 798, [2] p.

2. Bykov V.A. Cytology and general histology: Functional morphology of human cells and tissues: a textbook for medical students. int / V.L. Bykov. - St. Petersburg: SOTIS, 2007. -520c.

6.2. Additional literature.

1. Guide to histology: in 2 volumes: [rec. Department of educational medical institutions and personnel policy of the Ministry of Health of the Russian Federation]: study. a manual for university students, graduate students and students of the system of additional medical education / ed. R.K. Danilova. - 2nd ed., rev. and additional - St. Petersburg: SpetsLit, 2011.- 480 p.

2. Histology, embryology, cytology: a textbook for honey. universities with CD/ed. E.G. Ulumbekova, Yu.A. Chelysheva. -ed. 3rd, revised and additional – M.: GEOTAR-Media, 2007. - 408 p.

6.3. Periodicals

1. Cytokines and inflammation 2. Cytology
3. Advances in modern biology 4. Morphological statements 5. Molecular biology 6. Morphology
6. Science and life
7. Kazan medical journal 8. News of the Russian Academy of Sciences. Biological series
9. Journal of Basic Medicine and Biology
10. Journal of Anatomy and Histopathology
11. Archive of pathology
12. Medical Bulletin

6.4. Internet resources

	ELECTRONIC EDUCATIONAL RESOURCES	**Access to the resource**
1.	**Electronic libraryRost State Medical University** .– URL:http://109.195.230.156:9080/opacg/	Unlimited access
2.	**Student Advisor**: EBS. – Moscow: LLC “IPUZ”. - URL:http://www.studmedlib.ru	Access is not limited
	Doctor's consultant. Electronic medical library: EBS. –	Access

3.	Moscow: LLC GC "GEOTAR". - URL:http://www.rosmedlib.ru	is not limited
4.	**UpToDate**: DB / Wolters Kluwer Health. – URL:www.uptodate.com	Access is not limited
5.	**Consultant Plus** :legal reference system.-URL: http://www.consultant.ru	Access from university computers
6.	**Scientific electronic library eLIBRARY** .- URL: http://elibrary.ru	Open access
7.	**National Electronic Library**. - URL:http://neb.rf/	Access from computer slibraries
8.	**Scopus**/ Elsevier Inc., Reed Elsevier. – Philadelphia: Elsevier BV, PA. – URL:http://www.scopus.com/ *(National project)*	Access is not limited
9.	**WebofScience** /ClarivateAnalytics.-URL: http://apps.webofknowledge.com *(National project)*	Access is not limited
10.	**ScienceDirect. Freedom Collection**[journals] / Elsevier. – URL: www.sciencedirect.com by IP addressesRostSMU.*(National project)*	Access is not limited
eleven.	**Springer Nature database**. - URL:http://link.springer.com/ By IP addresses of RostSMU. (National project)	Access is not limited
12.	**WileyOnlineLibrary**/ JohnWiley&Sons.- URL: http://onlinelibrary.wiley.com by IP addresses of RostSMU. (National project)	Access from university computers
13.	**Single window of access to information resources**.- URL: http://window.edu.ru/	Open access
14.	**Russian education. Federal educational portal**. - URL:http://www.edu.ru/index.php	Open access
15.	**ENVOC.RUEnglishvocabulary**]: educational site for studying English language - URL:http://envoc.ru	Open access
16.	**Online dictionaries**. - URL:http://dic.academic.ru/	Open access
17.	**WordReference.com** :online language dictionaries.- URL:http://www.wordreference.com/enru/	Open access
18.	**History.RF**. - URL:https://histrf.ru/	Open access
19.	**Legal Russia** :federal legal portal. - URL:http:// www.law.edu.ru/	Open access
20.	**Official Internet portal of legal information**. - URL: http://pravo.gov.ru/	Open access
21.	**Federal Electronic Medical Library of the Ministry of Health Russia**. - URL:http://www.femb.ru/feml/,http://feml.scsml.rssi.ru	Open access
22.	**Medline**(PubMed, USA). – URL:https://www.ncbi.nlm.nih.gov/pubmed/	Open access
23.	**Free Medical Journals**. - URL:http://freemedicaljournals.com	Open access
24.	**Free Medical Books**. - URL:http://www.freebooks4doctors.com/	Open access
25.	**International ScientificPublications.–** URL:https://www.scientific-publications.net/ru/	Open access
26.	**CyberLeninka**: scientific electron. beep. - URL:http://cyberleninka.ru/	Open access
27.	Archives of scientific journals/NEIKON.-URL: https://archive.neicon.ru/xmlui/	Open access
28.	**Open access journals in Russian** /ElPub platform NEICON. – URL:https://elpub.ru/	Open access
	Medical Bulletin of the South of Russia .-	Open

	URL:	

29.	https://www.medicalherald.ru/jour or from the RostSMU website	access
thir ty.	**World Health Organization**. - URL:http://who.int/ru/	Open access
31.	**Evrika.ru** information and educational portal for doctors. – URL:https://www.evrika.ru/	Open access
32.	**Med-Edu.ru**: medical video portal. -URL: http://www.med-edu.ru/	Open access
33.	**Univadis.ru**: international honey. portal. - URL:http://www.univadis.ru/	Open access
34.	**DoctorSPB.ru**:information-reference portalmedicine.-URL: http://doctorspb.ru/	Open access
35.	**Modern problems of science and education**: electron. magazine. - URL:http://www.science-education.ru/ru/issue/index	Open access
36.	**Rubricator of clinical recommendations**Ministry of Health of Russia. - URL: http://cr.rosminzdrav.ru/#!/	Open access
37.	**Education on**Russian: portal / State. Institute of Russian language them. A.S. Pushkin. - URL:https://pushkininstitute.ru/	Open access
	Other Open resources can be found at: http://rostgmu.ru →Library→Electronic catalog→OpenInternet resources→further by keyword…	

6.5. Guidelines for students on mastering the discipline

1. A textbook for practical classes in cytology, embryology and general histology / Compiled by: P.A. Khloponin, V.I. Sulima, A.I. Novikov et al; Growth of GMU.-Rostov-on-Don : Publishing House Rost State Medical University, 2007. -58c.

2. Textbook for practical classes on private histology and human embryology / compiled by: P.A. Khloponin, V.I. Sulima, A.I. Novikov [and others]; edited by P.A. Khloponin; Height. state honey. university, department histology, cytology and embryology. -Rostov-on-Don: RostSMU, 2012. - 79 p.

VII. LOGISTICS DISCIPLINES

7.1. Educational and laboratory equipment.

1. **Training rooms equippedmicroscopes, visualmanuals for practical training.**

7.2. Technical and electronic means.

1. **Presentations**
2. **Poster sets**
3. **Tables by schemes**

SumpointsScores
85-1005
71 -844
60-703
60 -100passed
0-592

Appendix 2

CHECKLIST

discipline: Histology, cytology, embryology

I approve
Head of department prof. P.A. Khloponin

form of intermediate certification: exam/test

Department: Histology, cytology and embryology

Course: 1.2 Semester 2.3 Specialty: 05/31/01 (General Medicine)

No.	Types of control	Number of points for 1 control event*	Number of events	min – max number of points total
	Current control: performance in classes, attendance at lectures,			
	other types of current control... Milestone control: testing	2-3		32-48
	colloquium	1		
	oral interview solving situational problems laboratory work			
	other types of control..			
	Total			
				60 – 100

Accrual of bonus points: depending on the specifics of the discipline, specific types of academic activity of the student are indicated, for which the department awards bonus points.

Note:

*The number of points for ongoing control activities is set by the department, taking into account the possibility of the student receiving a positive certification. When establishing minimum and maximum values for one control event, the evaluation criteria must be reflected in the checklist.