

MINISTRY OF EDUCATION AND SCIENCE OF THE RUSSIAN FEDERATION

PENZA STATE UNIVERSITY

MEDICAL INSTITUTE



AGREED:

Director of the Medical Institute

A.N. Mitroshin

05 " March 2016.

STUDY PROGRAM

C1.2.1 Medical anthropology

Course – 31.05.01 General Medicine

Graduate's qualification – Medical doctor

Type of study – full-time

Penza – 2016

1. Aims and goals

The purpose of the mastering of medical anthropology is the study of anatomical and physiological, age and sex, and the individual characteristics of the structure of the human organism.

The purposes of studying medical anthropology are: to study the variability of the structure and topography of body, individual, gender and age-specific body structure, variability of certain organs and defects of their development.

2. Links to other disciplines of the general curriculum

Academic discipline «Medical anthropology» refers to the variable part of the cycle C1. Disciplines.

Medical anthropology is one of the basic disciplines, which is connected with the disciplines: Latin, Biology, Histology, and Human Anatomy.

The main theses of Medical anthropology require for studying the clinical disciplines: Physiology, Pathological Anatomy, Topographic Anatomy and Operative Surgery, Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Neurology, Otorhinolaryngology, Ophthalmology, Urology, Traumatology and Orthopedics.

3. Student competences, developed during learning “Medical anthropology”

According to the state curriculum for the course, learning is oriented at developing the following competences and their elements:

Competence code	Name of the competence	Structural elements of the competence (knowledge, skill, application as a final learner outcome)
GC-1	ability of abstract thinking, logical analysis and synthesis skills	knowledge: general patterns of origin and evolution of life; anthropogeny and human ontogeny, the main patterns of development and functioning of the body of an adult and a teenager on the basis of the structural organization of cells, tissues and organs; anatomical and physiological, age and sex and the individual characteristics of the structure and development of healthy and sick human functional systems of the human body.
		skill: find in preparations show and call in Latin studied anatomical structures; palpate the main man on bony landmarks, topographic contours outline organs and major vascular and nerve trunks; analyze histological assessment of a variety of cellular, tissue and organ structures in patients and analyze results X-ray examination of patients.
		application: biomedical conceptual apparatus; basics of scientific and technical information of medical subjects, reviewing the results of clinical, laboratory and instrumental methods of examination of patients.
GPC-1	willingness to solve typical problems in their professional activities using different information sources, medical terminology,	knowledge: histofunctional particular tissue elements, and methods of their investigation; anatomical and physiological, age and sex and the individual characteristics of the structure and development of healthy and sick human functional systems of the human body, their regulation and self-regulation when exposed to

Competence code	Name of the competence	Structural elements of the competence (knowledge, skill, application as a final learner outcome)
	computer technologies and complying with the demands of information security	<p>the external environment in normal and pathological processes.</p> <p>skill: analyze the modern domestic and foreign scientific and technical information, use this knowledge to assess the functional state of the body of an adult and a teenager.</p> <p>application: biomedical conceptual apparatus; basics of scientific and technical information of medical subjects, reviewing the results of clinical, laboratory and instrumental methods of examination of patients.</p>
GPC-7	implementing knowledge in general science and its branches for solving professional tasks	<p>knowledge: medical anatomical conceptual apparatus structure of the human body, the general laws of origin and evolution of life, and human ontogenesis anthropogeny, basic laws of development and functioning of the human body.</p> <p>skill: find in preparations show and call in Latin studied anatomical structures; palpate the main man on bony landmarks, topographic contours outline organs and major vascular and nerve trunks; analyze histological assessment of a variety of cellular, tissue and organ structures in patients and analyze results X-ray examination of patients.</p> <p>application: biomedical conceptual apparatus; basics of scientific and technical information of medical subjects, reviewing the results of clinical, laboratory and instrumental methods of examination of patients.</p>
GPC-9	knowing how to use medicines, medical products and technologies in solving professional problems	<p>knowledge: the basic methods of making anatomical preparations, especially age structure of organs, the basic principles of the analysis of radiographs.</p> <p>skill: produce anatomical and analyze anatomical variants and abnormal structure of organs, to interpret the results of X-ray and CT examinations</p> <p>application: medical anatomical conceptual apparatus; underlying technologies transform information; basics of anatomical tools, reviewing the results of X-ray examination of patients.</p>

4. Structure and content of the discipline “Medical anthropology”

4.1. Structure of the discipline

Overall workload equals 3 ECTSs, 108 hours.

№	Names of parts and topics of the discipline	Semester	Week of the semester	Types of learner activities, including students' individual work and workload (in hours)									Forms of current assessment (divided in weeks)							
				Class study				Individual work					Discussion	Tutorial	Test assessment	Test paper grading	Research paper assessment	Workbooks assessment	Term paper (project)	Assessment of practical skills
				Total	Lectures	Practical classes	Laboratory classes	Total	Preparation for class study	Abstract	Term paper (project)	Exam preparation								
1.	General anthropology																			
1.1.	Anthropology: its history, trends and topics, objectives, general terms, the relationship with clinical medicine. The main stages of the development of anthropology.	2	1	4	2	2		1	1				1					1		
1.2.	Age periodization. Anatomical and functional characterization of age periods, the regulation of growth and development. Acceleration, decelerations and retardation.	2	2	2		2		2	1	1			2				2	2		
1.3.	Biological age. Familiarization with the indicators of biological age. Skeletal age, dental age, the severity of secondary sexual characteristics - as indicators of biological age. Aging. Longevity.	2	2	4	2	2		1	1				2					2		
1.4.	Traditional methods of anthropology. Descriptive research methods in anthropology. Anthroposcopy of face and body. Drawing up a verbal portrait.	2	3	2		2		2	1	1			3				3	3		

№	Names of parts and topics of the discipline	Semester	Week of the semester	Types of learner activities, including students' individual work and workload (in hours)									Forms of current assessment (divided in weeks)							
				Class study				Individual work					Discussion	Tutorial	Test assessment	Test paper grading	Research paper assessment	Workbooks assessment	Term paper (project)	Assessment of practical skills
				Total	Lectures	Practical classes	Laboratory classes	Total	Preparation for class study	Abstract	Term paper (project)	Exam preparation								
1.5.	Traditional methods of anthropology. Measuring methods. Anthropometric instruments. Saving time points and sizes. Saving time drawing up profiles.	2	4	4	2	2		2	1	1			4				4	4		
1.6.	Somatometry. Anthropometric points on the trunk and extremities. Main body size: a methodology for identifying and evaluating. Drafting of somatometric profile.	2	4	2		2		1	1				4					4		
1.7.	Physical development and its indicators. The proportions and the component structure of the body. Indices of proportionality and body surface area.	2	5	4	2	2		2	1	1			5				5	5		
1.8.	The doctrine of the constitutions. The notion of public and private constitution. Their relationship with the psychological characteristics, mental and physical illnesses.	2	6	2		2		2	1	1			6				6	6		
1.9.	Anatomical constitution. Variants of constitutional circuits. Meaning of somatotyping for biomedical anthropology and medicine.	2	6	4	2	2		1	1				6					6		
1.10.	Characteristics of blood groups. Their distribution in the ethno-territorial groups and meaning for anthropological research and medicine.	2	7	2		2		2	1	1			7				7	7		

№	Names of parts and topics of the discipline	Semester	Week of the semester	Types of learner activities, including students' individual work and workload (in hours)									Forms of current assessment (divided in weeks)							
				Class study				Individual work					Discussion	Tutorial	Test assessment	Test paper grading	Research paper assessment	Workbooks assessment	Term paper (project)	Assessment of practical skills
				Total	Lectures	Practical classes	Laboratory classes	Total	Preparation for class study	Abstract	Term paper (project)	Exam preparation								
1.11.	Leather. Dermatoglyphics. General information about the structure of the skin. The relief of the color and pigmentation of the skin. Additional formation of skin: hair and nails. Dermatoglyphics: morphology of finger patterns.	2	8	2		2		2	1	1			8				8	8		
1.12.	The mathematical treatment of the results of anthropological research.	2	8	2		2		1	1				8					8		
1.13.	Modern concepts of heredity and variation. The anatomical variability.	2	9	2		2		2	1	1			9				9	9		
2.	Particularistic anthropology																			
2.1.	Development, individual and age variability of the skeleton.	2	10	4	2	2		2	1	1			10				10	10		
2.2.	Development, individual and age variability of the skull.	2	10	2		2		1	1				10					10		
2.3.	Craniometric study. Basic craniometric points and sizes.	2	11	2		2		2	1	1			11				11	11		
2.4.	Anthropological dentistry. Patterns of development and change of teeth. The difference in the morphology of the teeth of different racial and ethnic groups.	2	12	4	2	2		2	1	1			12				12	12		
2.5.	Development, individual and age variability of the digestive system.	2	12	2		2		1	1				12					12		
2.6.	Development, individual and age variability of the respiratory system.	2	13	2		2		2	1	1			13				13	13		

№	Names of parts and topics of the discipline	Semester	Week of the semester	Types of learner activities, including students' individual work and workload (in hours)									Forms of current assessment (divided in weeks)							
				Class study				Individual work					Discussion	Tutorial	Test assessment	Test paper grading	Research paper assessment	Workbooks assessment	Term paper (project)	Assessment of practical skills
				Total	Lectures	Practical classes	Laboratory classes	Total	Preparation for class study	Abstract	Term paper (project)	Exam preparation								
2.7.	Development, individual and age variability of urinary and genital organs, endocrine organs.	2	14	5	3	2		2	1	1			14				14	14		
2.8.	Development, individual and age variability of the cardiovascular and lymphatic systems.	2	14	2		2		1	1				14					14		
2.9.	Development, individual and age variability of the central and peripheral nervous system.	2	15	2		2		2	1	1			15				15	15		
2.10.	Development, individual and age variability of the senses.	2	16	2		2		2	1	1			16				16	16		
2.11.	Credit on medical anthropology.	2	16	2		2		1	1				16		16					
2.12.	Credit on medical anthropology.	2	17	3		3		1	1				17		17					
	<i>Term paper</i>																			
	<i>Exam preparation</i>																			
	Overall workload, in hours			68	17	51		40	25	15			Interim assessment							
													Type		Semester					
													pass-fail exam		2					
													exam		-					

4.2. Content of the discipline

Anthropology: its history, directions and parts, the connection to clinical medicine, main terms.

Research methods in anthropology: anthropometry, anthroposcopy and physiometry. Body growth and development. Growth regularities. Age periodization. Anatomical characteristics of main age periods. Biological age. Acceleration and deceleration.

Physical development. The main body sizes: body mass, height, chest girth. Body proportions and content, age and sex differences.

The relation between constitution and somatic and mental diseases.

Age, sex and individual variability of skeletal-muscle system. Skeletal parts variability: spine, chest, upper and lower extremities. Muscle system specifics. Abnormalities of skeletal and muscle development.

Craniometry. Skull and head form age, sex and individual variability. Skull abnormalities.

Age, sex and individual variability of central nervous system, its abnormalities. Sensor organs age, sex and individual variability and anomalies.

Age, sex and individual variability of skin and its derivatives. Dermatoglyphic's bases and their usage in practice.

Age, sex and individual variability of digestive system. Teeth eruption time and sequence, their variability. Anomalies of digestive system development. Teeth anomalies.

Age, sex and individual variability of respiratory system and its abnormalities.

Age, sex and individual variability of urine organs, their abnormalities.

Age, sex and individual variability of male genitals and their abnormalities. Age, sex and individual variability of female genitals and their abnormalities.

Age, sex and individual variability of heart. and its abnormalities.

5. Teaching forms and techniques

- Traditional knowledge of anatomical and visual aids.
- Multimedia lectures
- Solving situational tasks
- Execution of written works (essays on the specified or free topic, reports).
- Individual work.

6. Teaching and learning materials for students' individual work. Forms of current and interim assessment.

6.1. Outline of students' individual work

№	Topic	Type of individual work	Task	Suggested reading material	Hours
1	Anthropology: its history, trends and topics, objectives, general terms, the relationship with clinical medicine. The main stages of the development of anthropology.	Preparation for class study	Preparing to control work using workbook	1. Lectures on medical anthropology 2. Working notes in class 3. Workbook on Medical Anthropology	1

№	Topic	Type of individual work	Task	Suggested reading material	Hours
2	Age periodization. Anatomical and functional characterization of age periods, the regulation of growth and development. Acceleration, decelerations and retardation.	Preparation for class study	Preparing to control work using workbook	The same	2
2	Biological age. Familiarization with the indicators of biological age. Skeletal age, dental age, the severity of secondary sexual characteristics - as indicators of biological age. Aging. Longevity.	Preparation for class study	Preparing to control work using workbook	The same	1
3	Traditional methods of anthropology. Descriptive research methods in anthropology. Anthroposcopy of face and body. Drawing up a verbal portrait.	Preparation for class study	Preparing to control work using workbook	The same	2
4	Traditional methods of anthropology. Measuring methods. Anthropometric instruments. Saving time points and sizes. Saving time drawing up profiles.	Preparation for class study	Preparing to control work using workbook	The same	2
4	Somatometry. Anthropometric points on the trunk and extremities. Main body size: a methodology for identifying and evaluating. Drafting of somatometric profile.	Preparation for class study	Preparing to control work using workbook	The same	1
5	Physical development and its indicators. The proportions and the component structure of the body. Indices of proportionality and body surface area.	Preparation for class study	Preparing to control work using workbook	The same	2
6	The doctrine of the constitutions. The notion of public and private constitution. Their relationship with the psychological characteristics, mental and physical illnesses.	Preparation for class study	Preparing to control work using workbook	The same	2

№	Topic	Type of individual work	Task	Suggested reading material	Hours
6	Anatomical constitution. Variants of constitutional circuits. Meaning of somatotyping for biomedical anthropology and medicine.	Preparation for class study	Preparing to control work using workbook	The same	1
7	Characteristics of blood groups. Their distribution in the ethno-territorial groups and meaning for anthropological research and medicine.	Preparation for class study	Preparing to control work using workbook	The same	2
8	Leather. Dermatoglyphics. General information about the structure of the skin. The relief of the color and pigmentation of the skin. Additional formation of skin: hair and nails. Dermatoglyphics: morphology of finger patterns.	Preparation for class study	Preparing to control work using workbook	The same	2
8	The mathematical treatment of the results of anthropological research.	Preparation for class study	Preparing to control work using workbook	The same	1
9	Modern concepts of heredity and variation. The anatomical variability.	Preparation for class study	Preparing to control work using workbook	The same	2
10	Development, individual and age variability of the skeleton.	Preparation for class study	Preparing to control work using workbook	The same	2
10	Development, individual and age variability of the skull.	Preparation for class study	Preparing to control work using workbook	The same	1
11	Cranimetric study. Basic craniometric points and sizes.	Preparation for class study	Preparing to control work using workbook	The same	2
12	Anthropological dentistry. Patterns of development and change of teeth. The difference in the morphology of the teeth of different racial and ethnic groups.	Preparation for class study	Preparing to control work using workbook	The same	2
12	Development, individual and age variability of the digestive system.	Preparation for class study	Preparing to control work using workbook	The same	1
13	Development, individual and age variability of the respiratory system.	Preparation for class study	Preparing to control work using workbook	The same	2
14	Development, individual and age variability of urinary and genital organs, endocrine organs.	Preparation for class study	Preparing to control work using workbook	The same	2

№	Topic	Type of individual work	Task	Suggested reading material	Hours
14	Development, individual and age variability of the cardiovascular and lymphatic systems.	Preparation for class study	Preparing to control work using workbook	The same	1
15	Development, individual and age variability of the central and peripheral nervous system.	Preparation for class study	Preparing to control work using workbook	The same	2
16	Development, individual and age variability of the senses.	Preparation for class study	Preparing to control work using workbook	The same	2
16	Credit on medical anthropology.	Preparation for class study	Preparing to control work using workbook	The same	1
17	Credit on medical anthropology.	Preparation for class study	Preparing to control work using workbook	The same	1

6.2. Instructional guidance for individual students' work

- Lectures and theoretical block studying.
- The filling of work-books using definitions, answer the questions.
- Self-work in pairs with anthropometrical tools, measurements making.
- Main anthropological indexes calculation.
- Self-work using tables, tests, additional literature.

6.3. Current and interim assessment materials

Competence development assessment

№	Type of assessment	Topics (parts) assessed	Competences and elements assessed
1.	Discussion	Parts 1, 2	GC-1, GPC-1, GPC-7, GPC-9
2.	Test assessment	Parts 1, 2	GC-1, GPC-1, GPC-7, GPC-9
3.	Workbooks assessment	Parts 1, 2	GC-1, GPC-1, GPC-7, GPC-9
4.	Research paper assessment	Parts 1, 2	GC-1, GPC-1, GPC-7, GPC-9

Sample questions for control classes

1. What does literally mean the term "anthropology", who used it first and in what sense?
2. What is a "double understanding of anthropology"? At what stage of development of knowledge about the person did this division arise and what was it connected with?
3. Describe the main features of the Russian anthropological science. What distinguished the "Soviet period" of Russian anthropology?
4. What does a comprehensive approach mean in general terms in anthropological research? With the activity of what scientists the formation of this approach in the Russian anthropology is associated?
5. What is special about the humanitarian trend of anthropology? What is the subject of philosophical, cultural, social anthropology?
6. Are the dermatoglyphic patterns identical on the fingers of the left and right hands, and in monozygotic and dizygotic twins?

7. How are fingerprints taken?
8. Association with skin diseases patterns and other genetic markers.
9. What is the significance of mathematical and statistical methods in anthropological research?
10. What is the statistical population? What is the difference between a selected constellation and general?

Criteria for assessing of the interview in control classes

- “Excellent” - the story complete, competent, logical; fluency in terminology; answers to additional questions clear brief.
- “Good” - the story is not enough to single logical errors in particular; single error in the terminology; answers to additional questions correct, clear enough.
- “Satisfactory” - the story is not enough literate, part-time, with errors in the details; errors in terminology; answers to additional questions is not enough clear, with errors in particular.
- “Disappointing” - the story of an illiterate, incomplete, with gross errors; ignorance of the terminology; answers to additional questions wrong.

Demo variant of test

1. How is the doctrine of object structure variability, it's form and structure called?
 - 1) variability
 - 2) morphology
 - 3) auxology
 - 4) epistemology
2. Martine worked out the method of:
 - 1) somatology
 - 2) craniometry
 - 3) anthropometry
 - 4) metrology
3. Philosophical anthropology is a science about:
 - 1) human essence
 - 2) human world view
 - 3) human culture
 - 4) human development
4. Anthropogenesis studies the problems of:
 - 1) human origin and development
 - 2) human mobility
 - 3) human evolution
 - 4) human living on the certain territory
5. Physical development is most often evaluated using:
 - 1) indexes method
 - 2) twins method
 - 3) population-genetic method
 - 4) morphometry
6. The main evolutionary factor is:
 - 1) heredity
 - 2) mutations
 - 3) society
 - 4) natural selection
7. The main growth leap happens during:
 - 1) the first year of life
 - 2) 6-8 years old
 - 3) 13-15 years old

- 4) 18-20 years old
8. The first childhood is the age of:
 - 1) 1-3 years old
 - 2) 4-7 years old
 - 3) 8-11 years old
 - 4) till 1 year
9. Epochal development temps changing are called:
 - 1) growth leap
 - 2) Population maturing
 - 3) Evolutional trend
 - 4) Secular trend
10. The process opposite to acceleration is called:
 - 1) disharmonization
 - 2) «stress syndrome»
 - 3) demographic decline
 - 4) retardation
11. In elderly biological age criteria are all except:
 - 1) sexul hprmones content in blood
 - 2) neuro-dinamic features
 - 3) metabolizm activity
 - 4) secondary sexual characteristics development
12. Pinie constitutional index uses such parameter as:
 - 1) shoulder width
 - 2) pelvis width
 - 3) hip girth
 - 4) chest circumference
13. Viscerotony, sommatotony анявляются характd cerebrotony are the types of:
 - 1) somatotype
 - 2) metabolism
 - 3) temp
 - 4) Central nervous system
14. The part of morphology studying the skin relief is called:
 - 1) dermatology
 - 2) dermatometry
 - 3) dermatography
 - 4) dermatoglyphics

Criteria for assessing of the test

- “Excellent” (“5”) – 91% or more correct answers to test items.
 “Good” (“4”) – 81-90% of correct answers to test items.
 “Satisfactory” (“3”) – 71-80% of correct answers to test items.
 “Disappointing” (“2”) – 70% or less correct answers to test items.

7. Information materials for the discipline

a) Basic reading

1. Kalmin O.O., Galkina T.N., Grigorkina E.S. Lectures on medical anthropology: Tutorial. – Penza: PSU Publishing, 2016.
<http://elib.pnzgu.ru/library/15472900>

b) Supplementary reading

1. Kalmin O.V., Galkina T.N., Grigorkina E.S. Medical Anthropology. Testbook. – Penza: PSU Publishing, 2015

c) Software and Internet resources

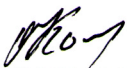
1. The Society for Medical Anthropology - <http://www.medanthro.net>
2. Medical Anthropology - <http://www.ucl.ac.uk/anthropology/about/medical-anthropology>
3. Medical anthropology, Stanford - <https://www.stanford.edu/dept/anthropology/cgi-bin/web/?q=node/1099>
4. Microsoft Windows (DreamSpark/Microsoft Imagine Standart); reg. number 00037FFE-BACF8FD7, contract № CД-130712001 of 12.07.2013.
5. Kaspersky Anti-Virus 2016-2017, reg. number KL4863RAUFQ, contract № XII-567116 of 29.08.2016.
6. Open source software: LibreOffice; Google Chrome; Adobe Reader; 7zip.

8. Equipment

№	Name of special classroom and classroom for independent work	Equipment of special classroom and classroom for independent work
1.	Classroom № 10-117, housing № 10, 45 m ²	Multimedia projector – 1 pc. Laptop – 1 pc. Screen – 1 pc. School table - 18 pcs. Stool – 40 pcs. Cupboard for aids – 3 pcs. Anatomical dummies. Visual aids. Anatomical tables.
2.	Classroom № 10-104, housing № 10, 58.5 m ²	Multimedia projector – 1 pc. Laptop – 1 pc. Screen – 1 pc. School table – 19 pcs. Stool – 40 pcs. Blackboard – 1 pc. X-ray view box – 1 pc. Anatomical dummies. Visual aids. Anatomical tables

The study program for the discipline “Medical Anthropology” is drawn in accordance with the federal state educational standard of higher education and academic plan for the course 31.05.01 – General Medicine.

The program developers:

Head of the Department of Human Anatomy  O.V. Kalmin


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The program was discussed and agreed at the department meeting

Records № 7 on “04” March 2016.

Head of the Department  O.V. Kalmin

The program is agreed with the Dean of the Medical Faculty of PSU

Dean of the Medical Faculty  I.Ya. Moiseeva

The program was approved by methodological commission of the Medical Institute

Records № 7 on “05” March 2016.

Chair of the methodological commission  O.V. Kalmin

Annual list of registration for changes and amendments to the present program

[illegible]