

SYLLABUS

concerning the cycle of education 2018-2024

(date range)

1.1. BASIC INFORMATION CONCERNING THIS SUBJECT / MODULE

Subject / Module	Anatomy
Course code / module *	A/A
Faculty of (name of the leading direction)	Faculty of Medicine, University of Rzeszow
Department Name	Department of Correct Anatomy
Field of study	Medical
Level of education	Uniform Master studies
Profile	General academic
Form of study	Stationary / non-stationary
Year and semester	1st year, 1st semester
Type of course	Obligatory
Coordinator	Professor dr hab. n. med. Stanisław Orkisz,

* - According to the resolutions of the Faculty of Medicine

1.2. Forms of classes, number of hours and ECTS

Lecture	Exercise	Conversation	Laboratory	Seminar	ZP	Practical	Self-learning	Number of points ECTS
30	45	-	-	25	-	-	15	11

1.3. The form of class activities

classes are in the traditional form

classes are implemented using methods and techniques of distance learning

1.4. Examination Forms / module (exam, credit with grade or credit without grade)

2. REQUIREMENTS

Knowledge about the structure and functioning of the human body at the high school level.

3. OBJECTIVES, OUTCOMES, AND PROGRAM CONTENT USED IN TEACHING METHODS

3.1. Objectives of this course/module

C1	Understanding the detailed anatomical structure of the human body based on descriptive anatomy, which divides the human body into particular systems considered in sequence: bone,
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	muscle, digestive, respiratory, urogenital, internal, vascular, nervous, common and sensory organs.
C2	Understanding correct human body structure, determines the functions of organs, systems and the organism as a whole. Dynamic development of imaging techniques of human body structures; radiology, computed tomography, magnetic resonance imaging and others that enable the visualization of structures and the interpretation of topographical relations between them, requires knowledge of normal anatomy. The student of the medical faculty, having knowledge in all the above-mentioned areas, acquires the ability to interpret the construction of the living subject to a degree that enables understanding of clinical issues and is prepared to the extent necessary to expand it in subsequent years of study and informed practical medical practice.

3.2 OUTCOMES FOR THE COURSE / MODULE (TO BE COMPLETED BY THE COORDINATOR)

EK (the effect of education)	The content of learning outcomes defined for the class (module)	Reference to directional effects (KEK)
EK_01	knows anatomical appointments in Polish and English	A.W1
EK_02	knows the structure of the human body in the topographical aspect	AW2
EK_03	has detailed knowledge of the structure of the macroscopic organs of the circulatory system, respiratory system, digestive system, urinary system, genital system, sensory organs and the shell of the common body	A.W2
EK_04	has knowledge of the structure and structural-functional correlation of the osteoarticular and muscular system	A.W2
EK_05	describes topographical relations between individual organs knows basic functional systems, their specialization, connections and symptoms of damage	A.W3
EK_06	can explain the anatomical basis of the physical examination (the site of the valves and points of their auscultation, the boundaries of the lungs and the pleura, the pupillary reflex)	A.U3
EK_07	defines, recognizes and indicates relations between anatomical structures in the documentation of life-long imaging of structures, especially in the field of radiology and imaging diagnostics	A.U4
EK_08	uses in speech and writing anatomical appointment	A.U5

3.3 CONTENT CURRICULUM (filled by the coordinator)

A. Lectures

Problems of the lecture

Course contents
Lecture 1

Organization of anatomy classes. Basic anatomical concepts.

Anatomy in a historical perspective

Practical classes, rules of conduct

Conditions for passing classes, colloquia, practical and test exams, textbooks

Basic anatomical concepts; axes, body lines, planes, body regions

Lecture 2

The concepts of cell, tissue, organ, system

Tissue characteristics, examples of occurrence

Systems: divisions taking into account morphological, topographical, developmental and clinical criteria

Structure and types of cartilage and bone tissue

General bone structure, development and bone types

Marrow

Lecture 3

Bone connections, structure and types

Permanent connections: coelozrosty, cartilage, bone-growth

Joint construction: permanent and non-permanent joint components

Types of joints, classification criteria

Range of movement in the joints

Anatomical basis of limitation of joint mobility

Lecture 4

Muscle building

Morphological basis of the mechanism of muscle contraction. The concept of muon.

Muscle building, muscle division taking into account the location, shape of the thigh

Muscle auxiliary organs

Lecture 5

Vascular system

Construction and types of vessels

Differences in the construction of venous and arterial vessels

Lecture 6

Absorbent system

Dishes of the lymphatic system

Central and peripheral organs of the lymphatic system.

Elements of clinical anatomy of the lymphatic system

Lecture 7

Surface anatomy of the chest and back.

Surrounding the chest and back.

The thoracic part of the spine, ribs, sternum

Chest bone connections

Superficial muscles and deep chest

The mammary gland. Road drainage lymph.

Lecture 8

Body posture

Muscles of the back. Division of the back muscles

Muscles acting on the joints of the spine

Anatomical conditions of posture defects

Lecture 9

Muscles of the abdominal wall

Abdominal press, anatomical bases, clinical significance

Places of reduced resistance. hernias

Lecture 10

Tissue and nervous system

Neural structure, body, organelles, dendrites, neurite

Synapse, neurotransmitters, motor circuit, neuromuscular spindle

Nerve fibers, structure, types of fibers, casings

Structure of the peripheral nerve

Glej, types, glia function

Lecture 11

Mediastinum.

Division, contents and topography of mediastinal organs

Heart development.

Anatomical basis of heart defects

Lecture 12

Heart, construction, location, pericardium

Dishes coming in and out of the heart cavities

Coronary arteries, coronography.

Regeneration and cardiac conduction system

Functional and clinical anatomy of the heart

Places of auscultating the valves and their projections on the wall

Lecture 13

Circulatory system

Aorta and its main branches

Large arteries of the trunk and limbs

Typical heart rate exam sites

Lecture 14

Venous system

The main trunks of the venous torso and limbs

Systems of portal vein and odd veins

Veins superficial limbs

Clinical aspects of the venous system, varicose veins

Lecture 15

Vascular connections

B. Problems of exercises

Course contents

Exercise 1: Upper limb rim. Shoulder and collarbone. The free part of the upper limb. The humerus. Forearm bones: elbow and radial bone. Hand bones: the bones of the wrist, metacarpus and fingers. The joints of the upper limb. Sterno-clavicular joints and the articular-clavicular joint (articular surfaces, joint capsule, ligaments, range of movements, joints of the free upper limb part) Shoulder joint: surfaces, labial capsule, handbag, ligaments, range of movements. Elbow joint: the shoulder and elbow joint, the brachial-radial joint, the radial-elbow joint closer (surfaces, purse, ligaments, range of motion), the interosseous membrane, the elbow-radial joint further, the radial-wrist joint (surfaces, articular disc, range of motion). Hand joints: Joints: between - and intravertebral joints, wrist and metacarpus joints, thumb and thumb joint (surfaces and types of movements), metacarpophalangeal and interphalangeal joints, X-ray anatomy of the bones and joints of the upper limb.

Exercise 2: Muscles of the upper limb muscle: supraspinous muscle, subheated thigh, upper and smaller sacral, shoulder, subscapular - carcass, innervation, action. Chest and back muscles attached to the upper limb: quadrilateral, widest back, levator, parallelogram, toothed, thoracic, subclavian - the effect of these muscles on movements in the joints of the upper limb. Down and axillary cavity: limitation, content. Axial medial and lateral opening. The brachial plexus - definition, topography, trunks and brachial plexus bundles. Branches of short plexus - range of innervation. Branches of the long brachial plexus. Shoulder area and skin nerves, fascia of the arm, intramuscular septum. Front group of the muscles of the arm: the biceps muscle of the shoulder, the coronary-brachial arm (trailers, innervation, action). Rear muscle group of the arm: triceps, elbow (trailers, activity, innervation). Musculo-cutaneous nerve: origin, course, branches, range of innervation.

Exercise 3: Forearm area, skin innervation, superficial veins. Bottom of the elbow. Dishes and nerves of the forearm. Forearm muscles: front, lateral and posterior groups - muscle identification, trailer, activity, innervation. Forearm fascia, intra-muscular stiffeners. Flexor retractors and extensors. Bottom of the elbow, limitation, topography of vessels and nerves in this area. Topographies of nerves: elbow, median and radial. Wrist channel, limitations, content.

Radial

hole.

Hand surroundings, hand skin innervation. Muscles of the hand: muscles of the withers, the ball and middle muscles (spongy and interosseous muscles) - identification, function, innervation. He will say his hand, tendon sheaths. Subclavian artery - topography, branches. The artery and axillary vein - the course in the axillary cavity, branches. Arteries and veins of the arm: brachial artery, topography, branches. Arteries and veins of the forearm: ulnar and radial artery (topography, branches). Hand arteries and palm arches; superficial and deep, arteries of the metacarpus and fingers, veins of the hand: superficial and deep. She was a non-radiation and quadrilateral vein.

Exercise 4: Bones of the lower limb rim: pelvic bone. hip, sciatic and pubic bone. The acetabulum of the hip joint. Curtain hole. The sock is bigger and smaller. Joint spacing: muscle and vessel spacing. Puddle. Bones of the free part of the lower limb: femur, bones of the lower leg (tibia and arrow), bones of the foot (tarsus, metatarsus and toes). Lower limb joints: sacroiliac joint, pubic symphysis. Pelvis as a whole. Joints of the part of the free lower limb: hip joint (surfaces, bag, ligaments, range of movements), knee joint (surfaces, bag, external and internal ligaments, range of movements). Pond and tibio-sagittal joint. Intraosseous shin membrane. Ankle and upper joint - joint surfaces, range of movements. Cross-step pond. Tarso-metatarsal and inter-osteoarthritis. Foot joints. Mechanics of joints of the foot. The vault of the foot. X-ray anatomy of bones and joints of the lower limb. The dorsal muscles of the lower limb hoop. Front group - ilium-lumbar muscle (trailer, activity, innervation). Rear group - gluteal muscles, muscle of fascia fascia broad, pear-shaped (trailers, activity, innervation, abdominal muscles of the lower limb rim - lenses, twin, trapezoidal thighs (trailers, activity, innervation), iliac fascia and fascia fascia.

Exercise 5: Thigh muscles. Front group of thigh muscles - tailor's muscle, quadriceps (trailers, activity, innervation). Medial group of thigh muscles - adductor muscles, comb and slender muscle (trailers, activity, innervation). Rear group of thigh muscles - thigh-bisected, semi-acute and semi-biliary muscle (trailers, activity, innervation). Fascia broad. Hip and tibial band. Intramuscular partitions. Lumbar plexus - formation, topography, branches. Their course and scope of innervation. Cross plexus - formation, topography, branches, their course and scope of innervation. The sock is bigger and smaller. Over and chink hole (restriction, content). Joint spacing: muscle and vessel spacing. Thigh triangle, hip and pubic bottom. Channel of addressers - restrictions, content. Thigh canal: thigh ring, saphenous solution. The femoral hernia, the curtain canal - restriction, content. Enhancement of the skin of the buttocks and thighs. Front shin group: front tibial muscle, long fingers extensor, long palpus extensor (trailers, activity, innervation). Side group of the shin muscle: arrow muscles (trailers, activity, innervation). Rear group of shin muscle (trailer, activity, innervation): superficial layer: gastrocnemius muscle, soleus, plantar, deep layer: popliteal muscle, long-back flexor, tibialis posterior, flexor, long toe. The popliteal fascia. Popliteal fossa - limitation and content. Fascia tibia. Drawstrings, extensor muscles, flexors. Medial cube - limitations, content. Regeneration of the shin skin. Topography and scope of innervation of the tibial nerve and peroneal nerve and their branches.

Exercise 6: Short muscles of the foot: the muscles of the back of the foot and the plantar muscles. Dishes and femoral artery - topographies, branches, accompanying veins. Popliteal artery - beginning, course, division. Tibial arteries - the course, branches. Knee joint network. The system of superficial and deep veins of the lower limb - practical remarks. Lymphatic system of the lower limb, group of lymph nodes. Anatomy of a living person: watching and groping bone points, muscles and tendons on the lower limb, pulse tests of typical places. Settings of movements and muscles performing them in individual joints of the upper and lower limb. X-ray anatomy, upper and lower limb angiography. Pond nets.

Test 1

Exercise 7: Surroundings and orientation lines of the chest. Spine characteristics (division into segments, curvature, spinal canal) Spine function. Features of the circle construction and characteristics of individual sections. Strict and mobile connections within the spine (structure and structure of the intervertebral disc). Ribs - construction features (rib characteristics of the first). Bridge - morphological features. Combination of ribs with a sternum and spine. General structure, shape variability and chest mechanics. Human anatomy - defining bone points of the chest (cervical incision and sternum process, rib arch, subostal angle, spinous processes of the vertebrae). Counting ribs. X-ray anatomy of the bones of the spine and chest. Chest muscles (trailers, innervation, vascularization, activity): superficial - greater pectoral, minor pectoral, subclavian, frontal teeth; deep - mm. intercostal, mm. transverse, transverse chest. Topography of the vaso-nerve cord in the intercostal space. The thoracic fascia. The vascularization of the chest walls. Branches of the subclavian artery (internal thoracic parenchyma, intercostal upper ventricle, thoracollar column, lateral thoracic parenchyma). Thoracic aortic wall branches (upper diaphragmatic torso, posterior intercostal volume). Venous outflow from the chest walls (odd venous system, skin veins of the front chest wall). An unevenness in the chest wall. Shoulder plexus - supraclavicular part. Intercostal nerves. The mammary gland - structure, vascularity, innervation, activity and drainage routes of the lymph from the nipple. The ridge - the area and orientation lines on the ridge. Muscles of the back (trailers, innervation, vascularization, activity): superficial - trapezius, m. The widest ridge, parallelogram, larger and smaller, m. Levator, mm. toothed rear; deep - m. spine rectifier. Sub-healthy muscles - trailers, innervation, vascularization, activity. Spine fascia (thoracolumbar fascia). Dorsal branches of thoracic spinal nerves.

Exercise 8: Ascending aorta and aortic arch, upper main vein, brachiocephalic veins, diaphragmatic nerves - topographic relations, activity. Pleura - definition, division. Pleural pleas. Pulmonary ligament, mesentery of the lung, pleural compresses. Pleural and pleural vascularization. Pleura activity. Trachea - definition, topographical relations, tracheal wall construction. Splitting the trachea and the difference between the right and left main bronchi. Tracheal vascularization and innervation. Lungs - topographical relations, general structure (arrangement of the lung root part within the lung cavity on the right and left sides). Division of intrapulmonary bronchial tree. Broncho-pulmonary segments. Structure of the lung parenchyma (definition of the pulmonary group). Functional and pulmonary vascularization. Pulmonary ailment. Lung lymphatic system. Pulmonary function (ventilation of the lungs, diffusion of gases through the vesiculose-capillary membrane). Diaphragm - definition, part of the diaphragm. Openings, slots, crevices and their contents. Diaphragm operation. Pleading and vascularization. Diaphragmatic hernia. Mechanics of breathing and types of breathing. Definition and division of mediastinum. The organs, vessels and nerves of the upper, front and rear mediastinum. Thymus - structure, topographic relations, activity.

Exercise 9: Heart - topographic relations in the chest (location, shape, fixation). Morphological features of the outer surface of the heart. The construction of the heart wall. Construction of individual heart cavities. Heart valves - construction, operation. Throw the valve on the front of the chest. Coronary circulation (topography of coronary arteries,

extent of vascularization, vascularisation of the conducting system). Outflow of venous blood from the walls of the heart. Heart anatomy. The influence of the autonomic nervous system on myocardial function and the conductive system. The lymphatic system of the heart. Pericardium - definition, division (pericardial sinus), activity, vascularization, innervation. Thoracic aorta - topographical relations, branches. Pectoral cord - beginning, course, inflows. Dishes and lymph nodes of the chest. Fetal circulation - fetal circulation remains in the chest. The thoracic part of the sympathetic trunk (topography, branches), topography and branches of vagus nerves in the thoracic region. Interpretation of X-ray images of organs and chest vessels

Exercise 10: Around the neck. Muscles of the neck (superficial - wide neck, sternocleidomastoidal, central - subcranial and excentric mm, deep - inclined) - trailers, innervation, vascularization, operation. Foreskin - division: Fascia of the neck. Neck triangles - limiting the content. Cervical plexus - definition, topographic relations, skin and muscle branches. The dorsal branches of the cervical spine. Topography of the sublingual nerve. Additional nerve - topography, range of innervation. The cervical segment of the sympathetic trunk - topography and branches. The lymphatic system of the neck. The thyroid gland and parathyroid glands - structure, topographic relations, vascularity, innervation, activity. Common carotid artery - place of departure, course, division (carotid gland - innervation, activity). The ball of the rail. Nerve-nerve cord neck - composition, topographic relations. Internal carotid artery - the course on the neck. Vagus nerve - cervical segment (topography and branches). External carotid artery - topographic relations, branches Upper thyroid artery, lingual artery, occipital artery, posterior aorta, ascending throat. External jugular vein - formation, topography, inflows. Larynx - the skeleton of the larynx (morphological features of the laryngeal cartilages). Strict and joint connections of the laryngeal cartilage. Mechanics of the larynx joints. Membrane and ligamentous connections of the laryngeal cartilage with adjacent forms. Membrane and ligamentous connections inside the larynx (elastic cone, quadrilateral membrane). Functional division of the larynx muscles (trailers). Division of larynx cavities. Limiting the entry of the larynx. The upper larynx cavity. Indirect laryngeal cavity (definition of vestibular folds, vocal folds, vocal lips, glottis, laryngeal pocket). Bottom of the larynx. Vascularization and innervation of the larynx. Larynx function.

Test 2

Exercise 11: General concepts. Division into the surroundings. Pelvis as a whole. Detailed structure of the pelvic and sacrum. Cross-iliac joints and their function. Pubic symphysis. Pelvic ligaments. The sock is bigger and smaller. Curtain hole. Dimensions of the pelvis, conjugate, pelvic surfaces. Abdominal wall - layers. Abdominal muscles - trailers, innervation, vascularization, activity. The concept of aponeurosis. Structure of the abdominal muscle sheath above and below the arcuate line and its contents. The internal surface of the anterior abdominal wall - folds, pits. The inguinal canal - location and limitation of inguinal rings (superficial and deep), walls, course and contents of the inguinal canal. Places of reduced resistance of the abdominal wall - replace and give limitations. Concept of a hernia. Abdominal hernia - congenital and acquired, internal, detailed knowledge of anatomical relations in straight and oblique inguinal hernia. Human anatomy - bone pelvic points, Lanza

point, Mc Burney and correlation of the position of individual organs with the sounds of tapping the abdominal cavity.

Exercise 12: Peritoneum- layered structure, peritoneal functions. Peritoneal cavity, peritoneal sac. The network bag - location and restrictions, entries into the network bag, network bag mesenteries and walls, organs adhering to them. The network is smaller and larger. The construction of mesentery and ligaments in the abdominal cavity. Organ-to-peritoneal ratio - intra-, extrinsic and retroperitoneal position. Mutual placement of abdominal organs - replace these organs, indicate their location, determine what organs are adjacent. Determine the location of specific organs on the living subject. Gastrointestinal tract - parts, general structure of gastrointestinal walls - layers, innervation. The abdominal part of the esophagus. Topography of vagus nerves in the esophagus's surroundings. Esophageal vasculature. Stomach - external and layered structure. Gastric mucosa - mucous glands, separation of structure in different parts of the stomach, gastric digestive enzymes. Structure and activity of the pylorus. Duodenum - external and layered structure. Duodenal mucosa - duodenal glands, duodenal digestive enzymes. Duodenal diverticula. Gut and winding ileum - location of the course, division into parts. Structure of the intestinal mucosa in the proximal and distal segments. Small intestine functions. Arterial vascularization of the stomach, duodenum, jejunum and ileum. Angioarchitectonics of vessels running in various sections of the intestine. Meckel diverticula - location, practical meaning. Intestines, colon (ascending, transverse, descending, sigmoidal, rectum) - location, function, vascularity, attitude to the peritoneum. Appendectomy - construction, meaning, location variants. Differences in external structure, mucosa and angioarchitektonics of the small and large intestine. The ratio of the organs of the gastrointestinal tract to the peritoneum. X-ray images of the gastrointestinal tract.

Exercise 13: Liver - location, external structure, division into lobes. Cavity, liver ligament. Construction has altered hepatic function and liver function. Bile - origin, physiological significance. Inside, hepatic bile ducts. Functional and nutritional vascularization of the liver. Liver veins. The concept of the liver segment, liver division. Intrahepatic bile ducts and their topography. Gallbladder - external structure, location, function. Anatomic and functional valves in the bile ducts. Pancreas - location, division into parts, fine structure. Enzymatic and hormonal activity of the pancreas. Pancreatic ducts and their topography. Pancreatic vascularization. Digestion of foods in the digestive tract. Spleen - location, internal and external structure, ligaments. Spleen function. Vascularization. Abdominal aorta - layered walls, crossing the diaphragm, location, aortic branches and their topography. Arterial abdominal circulation in the abdominal cavity, physiology of visceral circulation. The lower main vein - the layered structure of the walls, the passage through the diaphragm, the tributaries, the areas from which it collects the blood. The concept of portal circulation. Portal circulation in the abdominal cavity and its physiological significance. Formation and topography of the portal vein. Portal hypertension. Ocular, pulmonary, renal, rectal and retroperitoneal circulation. Anatomical connection of the upper and lower main vein. Spleen and lymph nodes in the abdominal cavity, dairy tank. Fetal circulation - outline. Remains of fetal circulation in the abdominal cavity. The autonomic nervous system - the

physiology of the sympathetic and parasympathetic parts in relation to the organs of the digestive tract. Lumbar, ventral and pelvic segment of the sympathetic trunk. Visceral plexus - structure, location, branches, secondary plexuses. Neural strands in the gastrointestinal wall. Visceral and somatic pain in the aspect of innervation of the abdominal organs. Head fields

Exercise 14: Kidney - location, external structure, fixation of the kidneys. Kidney bags. Structure of the kidney in the frontal section. Nefron - construction and operation. Renal vascularization. Stubile construction of urinary outflow routes. Ureter - layered walls, course, topography, peristalsis. Urinary bladder - external structure, relation to the peritoneum. The structure of the bladder mucosa - the bullous triangle. Vascularization and innervation of the bladder. The mechanism of holding and displacing urine. Urethra - the course, the difference in the structure of the male and female urethra. Adrenal glands - location, external structure, activity. Layered internal structure - hormones corresponding to individual layers and their activity. Crotch and crotch area in men and women. Pelvic diaphragm, urogenital diaphragm - parts, structure, operation. Rectum - layered structure, detailed mucosal structure, arterial and venous vascularization. Anus. Varicose veins and haemorrhoid nodules. Internal iliac artery - visceral and wall branches. Lumbar plexus, sacral plexus - formation of position, short and long branches. The pudendal nerve - topography and range of innervation. Ductus, sciatica-rectum.

Test 3

Exercise 15: The epididymis - structure, function. Vas deferens - the course. Spermatic cord - elements included in the spinal cord, the course of the spermatic cord. Prostate gland - location, structure, detailed topographic relations. Seed vesicles and bulbous-tubular glands. The physiological significance of additional sexual glands. Anatomical relations during rectal examination. Scrotum. The penis - external and internal structure, vascularization and innervation. Erection and ejaculation mechanism. Urethra - the course, division into parts, mouth glands. Genetic, gonadal, somatic, social-psychotic gender. Sexual dimorphism in the field of general body structure. Skeleton. Inner love of the external genitalia. Ovary - location construction, ligaments, vascularization. Hormonal activity of the ovary. Releasing an ovum - an ectopic pregnancy. Ovoid - division into parts, layered walls, activity, vascularization. Uterus - external and layered structure. Endometrium, myometrium, perimetrium, parametricum. Correct and incorrect position and position of the uterus. Uterine ligaments. Cyclic changes in the endometrium. Vulva - crotch, vestibule of the vagina and vestibular glands, urethral meatus, clitoris, labia majora and larger, hymen. Vagina - a layered structure of vaginal vault walls. Female urethra. Anatomy of insemination and fertilization. Childbirth - birth canal topographical relations during rectal and two-handed examination in women.

C. Seminars

Course contents

Introduction to anatomy. Bone structure. Bone connections. Bone connections - types of connections, construction, functions. Bones of the upper limb. Connections of the upper limb

Division of muscle tissue. Muscles of the upper limb. Dorsal and axillary cavity. Arm muscles. Surrounding the shoulder and arm.

Forearm and hand muscles. Bones of the elbow. Bones and nerves of the forearm. Muscles of the hand. Nerves: ulnar, radial, median - topography, range of innervation, symptoms of paralysis.

Bones of the lower limb Connections of the lower limb. Muscles of the lower limb. Lumbar plexus. Cross plexus.

Thigh muscles. Shin muscles. Popliteal fossa. Fascia tibia.

Nerves.

Short foot muscles. Nerves of the foot. Vascularization of the lower limbs. Clinical aspects of foot anatomy.

Test 1

Spinal column and chest bones. Muscles, chest fascia and back. The vascularization and innervating of the chest wall. The mammary gland.

Trachea and bronchi. Lungs. Pleura. Mediastinum. Diaphragm.

Heart. Bones and innervation of the heart. Pericardium. Rear mediastinal organs. Fetal circulation. Chest x-ray anatomy.

Muscles and neck triangles. Cervical plexus. Thyroid gland. Bones and nerves of the neck. Larynx.

Test 2

Abdomen as a whole. Pelvis. The walls of the abdominal cavity.

Peritoneum. Stomach, duodenum, jejunum and winding. Intestine

Thick.

Liver, bile ducts, spleen, pancreas. Big abdominal cavities. Intra-abdominal cavities.

Kidneys, ureters, bladder, adrenal glands. Small pelvis - topographical relations, vessels and nerves. Lumbar-sacral plexus.

Male and female sexual organs. Female internal and external sex organs. Nucleus - structure, location, nuclear casings and their origin. Descent of testicles. Hormonal activity and spermatozoal nucleus.

Test 3

3.4 TEACHING METHODS

Communicative methods

Organizational forms of individual work, group work, discussion, problem solving and multimedia presentation of chosen field, case analysis, written translations in English

Lecture: lectures with multimedia presentation, providing students with in-depth scientific knowledge

in the field of anatomy, solving research problems

Seminars / seminars: discussion, preparation of a research problem and research methodology based on scientific publications, searching and collecting literature data on the basis of

scientific publications, work with databases, development of experimental results, statistical analysis, formulation and analysis of applications, participation in writing a scientific publication and preparing a congress message

Observation-based methods: demonstration, multimedia presentation

Methods based on the practical activity of students:

practical classes in the dissecting room

Methods of intra-articular imaging of anatomical structures: X-ray, CT, NMR

Teaching aids: a virtual anatomical table, anatomical models, boards, didactic films

4 METHODS AND EVALUATION CRITERIA

4.1 Methods of verification of learning outcomes

Symbol of effect	Methods of assessment of learning outcomes (Eg.: tests, oral exams, written exams, project reports, observations during classes)	Form of classes
EK_01	Observation during classes	prosectorial exercises
EK_02	Colloquium, exam	exercises, lectures
EK_03	COLLOQUIUM, PRACTICAL EXAM, TEST EXAM	exercises, lectures,
EK_04	Observation during classes, colloquium, test exam	exercises, lectures, seminars
EK_05	Colloquium, exam	exercises, lectures,
EK_06	Observation during the course of the prosector classes, colloquium, exam	exercises, lectures,
EK_07	Colloquium, practical exam	exercises
EK_08	Observation during the course of the prosector classes, practical exam, test exam	exercises, lectures, seminars

4.2 Conditions for completing the course (evaluation criteria)

The condition of passing the course is to achieve all the results of the training, in particular, to lectures - written test (MCQ test), verified learning outcomes: EK_02, EK_03, EK_04, EK_06,
 Exercises - credit with an assessment including:
 - attendance
 - activity on exercises
 - grades from partial tests
 - observation of the student's work and attitudes.
 Verified learning outcomes EK_01- EK_08,
 seminars - credit including:

- attendance
- student activity

Verified learning outcomes EK_01, EK_03, EK_04, EK_05, EK_08,

Exercises and seminars

1. systematic, full participation in the exercises
2. colloquia during the year with the assessment from the next sections of the anatomy in a topographical view.
3. test with single-choice and / or open problem questions

Knowledge assessment, verified learning outcomes:

Written test

5.0 - has knowledge of each of the contents of education at the level of 90% -100%

4.5 - has knowledge of each of the content of education at the level of 84% -89%

4.0 - has knowledge of each of the content of education at the level of 77% -83%

3.5 - has knowledge of each of the content of education at the level of 70% -76%

3.0 - has knowledge of each of the content of education at the level of 60% -69%

2.0 - has knowledge of each of the contents of education below 60%

Assessment of skills, verified learning outcomes:

5.0 - the student actively participates in classes, recognizes and is able to correctly name individual anatomical units on phantoms and in the human body; can relate knowledge of the detailed human anatomy, especially in the area of the musculoskeletal system and the nervous system with the function and tasks of individual organs.

4.5 - the student actively participates in the classes, with little help from the teacher he recognizes and is able to properly name individual anatomical units on phantoms and in the human body; can relate knowledge of the detailed human anatomy, especially in the area of the musculoskeletal system and the nervous system with the function and tasks of individual organs.

4.0 - the student actively participates in classes, with minor corrections of the teacher, commits minor mistakes, recognizes and is able to properly name individual anatomical units on phantoms and in the human body; can relate knowledge of the detailed human anatomy, especially in the area of the musculoskeletal system and the nervous system with the function and tasks of individual organs.

3.5 - the student participates in activities with corrections and teacher's instructions recognizes and is able to properly name individual anatomical units on phantoms and in the human body; can relate knowledge of the detailed human anatomy, especially in the area of the musculoskeletal system and the nervous system with the function and tasks of individual organs.

3.0 - the student participates in classes, with numerous corrections and instructions from the teacher, but commits minor mistakes and recognizes and correctly names individual anatomical units on phantoms and in the human body; can relate knowledge of the detailed human anatomy, especially in the area of the musculoskeletal system and the nervous system with the function and tasks of individual organs.

2.0 - the student passively participates in classes, commits blatant errors in the diagnosis and proper naming of anatomical units, and can not link knowledge of the

detailed human anatomical structure with the function and tasks of individual organs.

Knowledge evaluation, verified learning outcomes: EK_01-EK_05

Assessment of skills, verified learning outcomes: EK_06-EK_08

5. Total student workload required to achieve the desired result in hours and ECTS credits

Activity	Hours / student work
Hours of classes according to plan with the teacher	100
Preparation for classes	85
Participation in the consultations	2
The time to write a paper / essay	
Preparation for tests	90
Participation in colloquia	
Other (e-learning)	
SUM OF HOURS	227
TOTAL NUMBER OF ECTS	11

6. TRAINING PRACTICES IN THE SUBJECT / MODUL

Number of hours	
Rules and forms of apprenticeship	

1. LITERATURE

Obligatory sources:

1. Gray's Anatomy for Students. R.L. Drake, A.W. Vogl, W.M. Mitchell
2. Basic Clinical Neuroscience. P.A. Young, P.H. Young, D. Tolbert
3. Atlas of Human Anatomy. Frank H. Netter

Additional literature:

Additional sources for self-studying:

1. Clinically Oriented Anatomy. K.I.Moore, A.F. Dalley

Acceptance Unit Manager or authorized person