Thematic lesson plan of the seminar-type in the discipline "Topographic anatomy and operative surgery" for students in the main professional educational program of a specialist in the specialty 31.05.01 General medicine, focus (profile) General medicine, full-time form of education for 2024-2025 academic year

No.	Topics	Hours (academic)
	4 semester	
1.	**Introduction to the discipline**.[1] The concept of topographic anatomy and operative surgery. Study methods. Introduction to the department. Surgery. Separation and connection of tissues. Surgical instruments, their purpose, rules of use. Stop bleeding in the wound (temporary and final). Surgical knots and sutures. [2]	2
2.	**Mastering manual skills. Fundamentals of general surgical technique. Seam technology.[1]** Rules for the use of surgical instruments. Technique of knitting surgical knots. The imposition of skin sutures on models: single (nodal, single mattress, Spasokukotsky , Donati), continuous (twisting , continuous mattress, Multanovsky suture), intradermal continuous (cosmetic). [2]	2
3.	**Skin grafting.** [1] Main methods: free and non-free skin plastics. [2]	2
4.	**Mastering manual skills.** [1] Formation of the Filatov stem. Non-free skin grafting with local tissues. Limberg 's method . Free plastic flaps of different thicknesses. [2]	2
5.	**Topographic anatomy and operative surgery of the gluteal region.[1]** Borders, layers, projection of the neurovascular bundles on the skin, cellular spaces and pathways for the spread of pus through the cellular tissue. Surgical approaches to the gluteal arteries, features of their ligation. Localizations of phlegmon of the gluteal region and surgical incisions with them. [2]	2
6.	**Mastering manual skills.[1]** Clinical and anatomical substantiation of the technique for performing subcutaneous and intramascular injections, blockade of the sciatic nerve, skin incisions to open abscesses and phlegmon. Blockade of the sciatic nerve. [2]	2
7.	**Topographic anatomy and operative surgery of the hip joint, posterior thigh, popliteal fossa[1]**. Posterior region of the thigh and popliteal fossa: borders, layers, fiber, pathways of pus distribution. Projection of the sciatic nerve. Projection of the neurovascular bundle of the popliteal fossa and its topography. Surgical access to the popliteal artery. Jaubert 's fossa. Arterial collateral network of the knee joint. Ligation of the popliteal artery, restoration of collateral blood flow.[2]	2
8.	**Mastering manual skills.[1]** The structure of the hip joint, especially in children and the elderly. Joint puncture points. Clinical and anatomical substantiation of the pathology of childhood (congenital hip dislocations, osteochondropathy of the femoral head - Perthes disease , hip dysplasia) and old age (fracture of the femoralneck).[2]	2
9.	**Topographic anatomy and operative surgery of the anterior region of the thigh.[1]** Topography of the femoral triangle (boundaries, fundus, structural features of its own fascia, neurovascular bundle). The structure of the femoral canal: walls, subcutaneous ring, deep ring. Femoral hernia. Topography of the obturator canal. Topography of the adductor canal. Transverse cut of the thigh in the middle third. [2]	2
10.	**Mastering manual skills.[1]** Surgery for femoral hernia. Projection of the femoral artery on the skin. Surgical access to the femoral artery, collateral blood flow duringits ligation [2]	2
11.	**Topographic anatomy and operative surgery of the knee joint, lower leg.[1]** Topography of the lower leg: anterior and posterior regions, borders, muscular-fascial sheaths. Projection of neurovascular bundles on the skin. Cross section of the lower leg in the	2

	middle third. [2]	
12.	**Mastering manual skills.[1]** Surgical access to the anterior and posterior tibial arteries. Features of the clinical anatomy of the knee joint. Substantiation of limb deformity in case of ligament rupture, clinical symptoms: "drawer", balloting of the patella. Points of puncture of the knee joint.[2]	2
13.	**Topographic anatomy and operative surgery of the foot**.[1] Dorsum of the foot, sole of the foot: borders, layers, fascial sheaths. Vessels and nerves, their projection on the skin. Ankle canal, calcaneal canal. Ankle joint. The transverse joint of the tarsus (Chopart). Tarsus -metatarsal joint (Lisfranc).	2
14.	**Mastering manual skills.[1]** Clinical and anatomical rationale for various types of flat feet. Congenital malformations of the lower limb: congenital clubfoot, flat and flat foot. The position of the foot in case of damage to the tibial, common, superficial and deep peroneal nerves. Ankle puncture points. Ways of distribution of pus on cellular spaces. Operations for phlegmon of the foot. [2]	2
15.	**The doctrine of amputations.[1]** Methods of amputations. amputation technique. Cutting out flaps, crossing muscles, periosteum, bones, processing vessels and nerves. Exarticulation of the toes according to Garangio . Sharpe foot amputation. Osteoplastic amputation of the lower leg according to Pirogov. Amputation of the lower leg in the middle third by fascioplastic method. Amputation of the thigh according to Pirogov. Amputation of the thigh according to Gritti -Szymanowski. Features of amputations in children. [2]	2
16.	**Topographic anatomy and operative surgery of the shoulder girdle.[1]** Topography of the shoulder girdle : scapular region, deltoid, subclavian. Borders, layers, muscular-fascial cases. Vessels and nerves. Ways of distribution of pus on cellulose. Scapular arterial collateral circle. Opening of the phlegmon of the scapular and subdeltoid region. [2]	2
17.	**Topographic anatomy and operative surgery of the axillary region.** [1] border, walls of the axillary fossa. Three-sided and four-sided holes. Axillary neurovascular bundle, projection of the axillary artery onto the skin. The structure of the brachial plexus. Axillary lymph nodes.[2]	2
18.	**Topographic anatomy and operative surgery of the shoulder joint[1]**. External landmarks, structural features. Topographic anatomical substantiation of shoulder dislocations. Shoulder topography: borders, musculofascial sheaths. Brachial neurovascular bundle. Projection of the brachial artery. Topography of the median, radial, ulnar nerves. Cross section of the shoulder in the middle third.[2]	2
19.	**Mastering manual skills.[1]** Spread of pus from the armpit. Surgical access to the axillary artery, its ligation, restoration of collateral blood flow. Axillary phlegmon Clinical and anatomical rationale for shoulder dislocations and methods for their reduction. Shoulder puncture. Amputation of the shoulder by a two- flap skin- fascial method. [2]	2
20.	**Topographic anatomy and operative surgery of the elbow joint[1]** Features of the structure, external landmarks. Topography of the cubital fossa: borders, neurovascular bundles.[2]	2
21.	**Topographic anatomy and operative surgery of the forearm.[1]** Topography of the posterior forearm. Topography of the anterior region of the forearm. Borders, muscular-fascial sheaths, muscle layers. Vascular-nerve bundles, their projection on the skin. Topography of the cellular space of Pirogov- Paron . Cross section of the forearm in the middle third.[2]	2
22.	**Mastering manual skills. [1]** Fractures of the bones of the shoulder and forearm "in a typical place." Principles of applying bandage and plaster bandages. Projection lines of the main vessels. Application of arterial and venous tourniquet. Elbow puncture. Technique for	2

	filling systems for intravenous drip infusions. Puncture of the elbow joint Amputation of the forearm with a skin circular cuff. Surgical incisions for phlegmon of the cellular space of Pirogov-Paron. [2]	
23.	**Topographic anatomy and operative surgery of the arm.** [1] The dorsum and the palm of the arm. Topography of the synovial sheaths of the tendons of the arm External landmarks and projections of the vessels and nerves of the palm. Muscular-fascial cases, their contents.. Topography of the fingers. [2]	2
24.	**Mastering manual skills.**[1] Localization of phlegmons of the hand and surgical incisions with them. Ways of distribution of pus on the brush. Surgical incisions for panaritiums. Amputations and disarticulations of the phalanges of the fingers. The position of the hand in case of damage or compression of the nerves [2]	2
25.	**Vascular suture technique.**[1] Principles, special tools, prevention of thrombosis. A. Carrel 's method , modified by Morozova, Polyantsev , Solovyov. A.G. Konevsky. Vascular surgery for aneurysms. Plastic surgery of blood vessels. Operations for varicose veins. Suture and tendon plasty. Principles of operations on peripheral nerves. [2]	2
26.	Mastering manual skills. [1] The imposition of a vascular anastomosis on the prosthesis. [2]	2
27.	**Mastering manual skills.** [1] Kessler and Cuneo tendon suturing on pig feet [2]	2
28.	**Mastering manual skills.** [1] Classification and principles of applying soft bandages[2].	2
29.	Operation day. Operations on an experimental animals.	2
30.	Control testing for the 4th semester.	2
	5 semester	
31.	**Topographic anatomy and operative surgery of the cranial vault.**[1] Regions: fronto-parietal-occipital, temporal, mastoid region (boundaries, layers, blood supply, innervation, vienous and lymph outflow). Meninges of the brain,types of intracranial haematomas. Liquor circulation. Sinuses of the dura mater, their connections with the superficial veins. Localization of intracranial hematomas. Cronlein-Bryusova scheme. [2]	2
32.	**Topographic anatomy and operative surgery of the cranial vault.**[1] PST of wounds in the head. Stopping bleeding from superficial vessels, sinuses of the dura mater, bones, middle meningeal artery, trepanation of the mastoid process, topography of the Shipo triangle . Decompressive and osteoplastic trepanations .[2]	2
33.	**Topographic anatomy and operative surgery of the** base of the skull. [1] Internal base of the skull: cranial fossae, foramina, their contents (nerves and vessels). Typical lines of skull base fractures, topographic and anatomical substantiation of the main clinical symptoms in skullbase fractures. [2]	2
34.	**Mastering manual skills.**[1] Clinical and anatomical base of types of craniocerebral injuries of the cranial vault and the skull base. Technique haemostasis on the head. Applying soft bandages [2] .	2
35.	**Topographic anatomy of the trigeminal and facial nerves.**[1] Topography and function of the trigeminal and facial nerves, their main branches[2].	2
36.	**Topographic anatomy and operative surgery** of the facial part of the head. [1] Regions: buccal, parotid-masticatory (borders, vessels and nerves, cellular spaces). Features of the blood supply to the face. The connection of the veins of the face with the sinuses of the dura mater. The spread of purulent processes. Lamellar suture[2].	2

37.	**Topographic anatomy and operative surgery of triangles and fasciae of the neck.[1].** Neck triangles. Cellular spaces. The lymph nodes. Features of purulent processes on the neck. Topography of the submandibular and carotid triangles, medial neurovascular bundle, cervical plexus, cervical sympathetic trunk. Prescalene and interscalene cellular spaces. [2]	2
38.	**Topographic anatomy and operative surgery of** triangles and fasciae of the neck [1] Fasciae of the neck. Classification according to Shevkunenko . clinical significance. Cellular spaces of the neck. [2]	2
39.	**Mastering manual skills.[1]** Surgical approaches to the carotid arteries, ligation of the external carotid artery, ways to restore collateral blood flow. Cervical vagosympathetic blockade according to Vishnevsky. Puncture and catheterization of the subclavian vein.[2]	2
40.	**Topographic anatomy and operative surgery of the neck organ[1].**Topography of the pharynx, esophagus, larynx, trachea, thyroid and parathyroid glands, recurrent laryngeal nerve, cervical part of thoracic lymphatic duct. [2]	2
41.	**Topographic anatomy and operative surgery of the neck organ[1].**Upper and lower tracheostomy . Technique for performing subtotal and subfascial resection of the thyroid gland. Thoracic lymphatic duct drainage operation. Surgical access to the cervical esophagus. PST of neck wounds. Typical incisions for abscesses and phlegmon of the neck.	2
42.	**Mastering manual skills.[1]** Clinical and anatomical rationale for airway obturation. First aid: tongue fixation, airway insertion, tracheal puncture, Heimlich maneuver. Tracheotomy. Tracheal intubation on the simulator. [2]	2
43.	**Topographic anatomy and operative surgery of the chest.[1]** Topography of the intercostal space. Topography of the breast. Diaphragm topography. [2]	2
44.	**Topographic anatomy and operative surgery of the chest.[1]** The concept of mastitis. Surgical operations for mastitis. Sectoral resection of the mammary gland. Radical mastectomy according to Holstedt, Paty, Maden[2].	2
45.	**Mastering manual skills[1].** Puncture of the pleural cavity PST of wounds of the chest wall. Thoracotomy for access to the organs of the chest cavity. The concept of diaphragmatic hernia and methods of treatment. PHO of chest wounds with open pneumothorax.[2]	2
46.	**Topographic anatomy and operative surgery of the mediastinum and lungs[1].** Topography of the mediastinum and its compartments. Vessels and nerves of the mediastinum. The structure of the pericardium (topography blood supply, innervation). Heart suture. Surgical treatment of IHD. [2]	2
47.	**Mastering manual skills.[1]** Rationale and technique of pericardial punctures. First aid for fractures of the ribs, sternum, and clavicles. Clinical and anatomical substantiation of resuscitation measures: chest compressions, artificial respiration, cardiac defibrillation[2].	2
48	**Topographic anatomy and operative surgery of the mediastinum and lungs[1]** Topography of the organs of the posterior inferior mediastinum. Surgical anatomy of the lungs. The division of the lung into lobes, segments. The concept ofpulmonectomy , lobectomy, segmentectomy. [2]	2
49.	**Topographic anatomy and operative surgery of the anterio-lateral abdominal wall[1]** Division into regions. Projection of the white line of the abdomen, sheath of the rectus abdominis muscles, umbilical ring. Places of possible occurrence of external hernias of the abdomen. Topography of the inguinal canal. The process of descending the testicle into the scrotum, features of congenital inguinal hernia. [2]	2
50.	**Topographic anatomy and operative surgery of the anterio-lateral abdominal wall[1]** Topography of the inguinal canal in direct and oblique hernias. Sliding inguinal hernia. Operations for inguinal hernias. Plastic surgery of the anterior wall of the inguinal canal according to Girard-Spasokukotsky , Kimbarovsky , Postempsky . Surgical plastic of the posterior wall of the inguinal canal according to Bassini . Operations for umbilical hernias (according to Lexer , Mayo, Sapezhko), for hernias of the white line of the abdomen, laparotomy, surgical access to the abdominal organs. [2]	2

51.	**Topographic anatomy and operative surgery of the peritoneum and stomach.**[1] Compartments, sacs, canals, sinuses of the abdominal cavity their clinical significance. Laparotomy. Revision of the abdominal organs in trauma and inflammatory processes. Topography of the stomach: ligaments, holotopy, skeletopy, syntopy, blood supply, vienos and lymphatic drenage, innervation. [2]	2
52.	**Topographic anatomy and operative surgery of the peritoneum and stomach.**[1] Gastric surgery: suturing of perforated ulcer. Gastrostomy according to Witzel , Shtamm-Senn-Kader , Topprover . Resection of the stomach according to Billroth-1, Billroth-2. Vagotomy (stem, selective, proximal). Pyloroplasty . Gastrotomy. [2]	2
53.	**Topographic anatomy and operative surgery of supraacolic compartment**[1] Operations on the liver and biliary tract. Substantiation of portal hypertension syndrome. Liver suture, liver resection, cholecystectomy .Choledochotomy. Surgery for portal hypertension. Ultrasound anatomy of the organs of the upper floor of the abdominal cavity.[2]	2
54.	**Mastering manual skills.**[1] Suturing the wound of the liver on the pork (beef liver).Probing of the stomach on the simulator.[2]	2
55.	**Topographic anatomy and operative surgery of supraacolic compartment**[1]**.** Topographic anatomy of the pancreas, duodenum, spleen (ligaments, holotopy, skeletopy , syntopy , innervation, vienose and lymph outflow). Splenectomy. Pancreatoduodenal resection. Ultrasound anatomy of the organs of the upper floor of the abdominal cavity. [2]	2
56.	**Topographic anatomy and operative surgery of infracolic compartment**[1]**.** Topography of the mesenteric part of the small intestine of the jejunum and ileum. Intestinal sutures, overlay technique. Types of intestinal anastomoses. Resection of the small intestine. Ultrasound anatomy of the organs of the lower floor of the abdominalcavity.[2]	2
57.	**Topographic anatomy and operative surgery of infracolic compartment**[1]**.** Topography of the colon. Holotopy, syntopy blood supply, innervation, lymph outflow. Appendectomy. Imposition of an unnatural anus. Hemicolectomy. Operation of Hartmann. Drainage of the abdominal cavity [2].	2
58	**Mastering manual skills.**[1] Types of intestinal anastomoses. Intestinal sutures. Technique for performing intestinal sutures on simulators. Explanation of the symptoms of appendicitis. [2]	2
59.	**Topographic anatomy and operative surgery of the retroperitoneal organs**[1] Walls, fascia, cellular spaces, vessels, nerves and organs of the retroperitoneal space. Topography of the kidneys and ureters, surgical access to them. Nephrectomy. Pyelotomy. Nephrostomy. Weak sites in the lumbar region. Ultrasound anatomy of the organs of the retroperitoneal space. [2]	2
60.	**Topographic anatomy and operative surgery of the pelvic organs**[1]. Walls, fascia, cellular spaces, vessels, nerves and organs of the small pelvis. Fasciae and cellular spaces of the pelvis, compartments of the pelvis. Topographic anatomy and operative surgery of the pelvic organs. Localizations of abscesses of the pelvis. Paraproctitis. Surgical treatment of abscesses of the pelvis. Operations for hemorrhoids according to Miligan. Operations for hydrocele according to Winckelmann. Ultrasound anatomy of the pelvic organs.[2] Final testing .	2
	Total:	**120**

[1]- topic

[2] - essential content

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