

MINISTRY OF EDUCATION AND SCIENCE OF THE KYRGYZ REPUBLIC

Government-run educational institution of higher professional education
Kyrgyz-Russian Slavic University named after B.N. Yeltsin

Endorsed by
the Dean, Assoc. Prof. Abilova S.S.



Assigned to **Operative Surgery and Topographic Anatomy**

Academic curriculum 560001_23_1LDi.pli.xml
560001 KR General Medicine (for foreign student)

Qualification **medical doctor**

Form of training **full - time**

The program was compiled (and): Associate professor, lecturer, Beisembaev A.A.; senior lecturer, Gabaidulin A.V.

Course Hours Scheduling (per semester)

Semester (course, academic year)	3 (2.1)		4 (2.2)		Total	
	AC	CO	AC	CO		
Weeks	18		19			
Type of Training	AC	CO	AC	CO	CO	CO
Lectures	18		18		36	
Lab Practica	36		36		72	
Including Interactive Session	3				3	
Total In-class Session						
Including Interactive Sess	6		14		10	
Total In-class Session	54		54		108	
Face-to-face Learning	54		54		108	
Individual work	18		18		36	
Hours on control			36		36	
Total	72		108		180	

1. COURSE OUTLINE OBJECTIVES	
1.2	1.1 The objectives of the development of topographic anatomy and operative surgery is the acquisition of each student specific topographic and anatomical knowledge necessary to justify the diagnosis, understanding of the pathogenesis of the disease, possible complications, mechanisms of development, compensatory processes, as well as the choice of the most rational methods of surgical treatment.
1.3	1.2 Unlike normal anatomy, topographical anatomy and operative surgery consider the layered structure of the human body in the areas in the totality of all formations, starting with the skin and ending with the deepest moments in their morphological and functional unity.
1.4	1.3 The need for such an approach to the study of the structure of the human body is dictated by at least two considerations. First, in the vast majority of cases, the pathological process often has a local (regional) nature, and in General clinical terms, when diagnosing, some symptom must be associated with the pathology of a particular organ or the formation of a certain area. Secondly, even the adjacent areas may differ significantly both in the number of layers and their characteristics, which often underlies the differences in the clinical course and manifestations of essentially the same pathological processes. that is why, emphasizing these differences, we divide the body parts into parts, areas and smaller fragments (triangles, thirds).
1.5	1.4 In a view of these two provisions, it becomes obvious the importance of knowledge of the topographical anatomy of the areas as the basis of correct diagnosis, the choice of a conservative method of treatment of a particular type of pathology, taking into account the peculiarities of its course, and surgical interventions from the position of rational (less traumatic) accesses and surgical techniques.
1.6	1.5 To achieve the goal, the following tasks are set:
1.7	1.6 Formation of students' knowledge of topographic anatomy of areas, organs and systems, paying special attention to the clinically important anatomical and functional features;
1.8	1.7 Formation of students' skills to use the obtained topographic and anatomical knowledge to justify the diagnosis, explain the peculiarities of the course of pathological processes, solving diagnostic and surgical problems;
1.9	1.8 Students mastering the basic surgical actions and some typical surgical techniques;
1.10	1.9 Education of students, guided by the traditional principles of humanism and mercy, respectful and careful attitude to the studied object - the human body organs, the corpse;
1.11	1.10 Inculcation of high moral standards of behavior in the section halls of the medical university.

2. PLACE OF THE COURSE IN THE EDUCATIONAL PROGRAM	
Educational Program Units:	
2.1	Students' Preliminary Training Requirements:
2.1	Chemistry
2.2	Physics, Mathematics
2.3	Biology
2.4	Anatomy
2.5	History of Medicine
2.6	Biochemistry
2.7	Life Safety
2.8	Immunology
2.9	Histology, Embryology, Cytology
2.10	Normal Physiology
2.11	Basics of Computer Science
2.12	Bioethics
2.13	Practicum on Physiology
2.14	Medical Law
2.15	Biology
2.16	Latin Language
2.17	The care for patients of surgical profile
2.18	The care of patients of therapeutic profile

2.2	Course Units and Practical Sessions imposing the prior Proficiency	
2.2.1	2.2	Course Units and Practical Sessions imposing the prior Proficiency
2.2.2	2.2.1	Pathological anatomy
2.2.3	2.2.2	Oncology, radiation therapy
2.2.4	2.2.3	Anesthesiology, resuscitation, intensive care
2.2.5	2.2.4	Dentistry
2.2.6	2.2.5	Normal physiology
2.2.7	2.2.6	General surgery
2.2.8	2.2.7	Pathophysiology, clinical pathophysiology
2.2.9	2.2.8	Propedeutics of internal diseases
2.2.10	2.2.9	Faculty surgery
2.2.11	2.2.10	Urology
2.2.12	2.2.11	Pediatrics
2.2.13	2.2.12	Ophthalmology
2.2.14	2.2.13	Traumatology, orthopedics
2.2.15	2.2.14	Radiodiagnostics
2.2.16	2.2.15	Basics of emergency care
2.2.17	2.2.16	Assistant of procedural nurse
2.2.18	2.2.17	Obstetrics and gynecology
2.2.19	2.2.18	Neurology, medical genetics, neurosurgery
2.2.20	2.2.19	Physician assistant
2.2.21	2.2.20	Faculty therapy
2.2.22	2.2.21	Occupational disease
2.2.23	2.2.22	Hospital surgery
2.2.24	2.2.23	Hospital therapy
2.2.25	2.2.24	Infectious disease
2.2.26	2.2.25	Otorhinolaryngology
2.2.27	2.2.26	Assistant doctor APU
2.2.28	2.2.27	Pediatric surgery
2.2.29	2.2.28	Gerontology
2.2.30	2.2.29	Sectional course
2.2.31	2.2.30	Forensic medicine
2.2.32	2.2.31	Dermatovenerology
2.2.33	2.2.32	Sports medicine
2.2.34	2.2.33	Phthisiology
2.2.35	2.2.34	Standards of diagnosis and treatment
2.2.36	2.2.35	Medical rehabilitation

3. STUDENTS' COMPETENCIES RESULTING FROM THE COURSE UNIT (MODULE)

(МОДУЛЯ)

OPK-11: readiness for use of medical devices, provided by the procedures of medical care.

Know:

Level 1	Main methods of medical devices and tools application
Level 2	Methods of hand washing. Methods of treatment of the surgical field. Technique of local anesthesia. To use general and special surgical instruments and suture material as a guide to the blockade of Vishnevsky.
Level 3	Subject and objectives of operative surgery. Types of operations: radical, palliative, diagnostic. The concept of one-stage and multi-stage operations, urgent (urgent, emergency) and planned operations. The concept of aseptic and antiseptic. Classification of surgical instruments. The concept of microsurgery. Modern diagnostic devices used in surgery.

Skills:

Level 1	To justify the use of medical devices and tools
Level 2	To demonstrate the technique of knitting surgical units (marine and surgical). Apply, remove the skin seam. Suturing

	the muscles. Sutures on the subcutaneous tissue. Methods of administration of drugs. The technique of venipuncture and venesection.
Level 3	To cut the skin, fascia, muscle, etc.; to suture wounds on the skin, muscles, tendons; to expose vessels and nerves; to sew, bind blood vessels in the wound; to make cuts when opening ulcers (abscesses, phlegmons, lymphadenitis, panaritium, etc.); to perform a
Expertise:	
Level 1	Skills of work with medical devices and tools on biological objects and models
Level 2	Skills of palpation on the person of the main bone landmarks, the definition of topographic contours of the organs
Level 3	Knowledge of topographic anatomy: to justify the diagnosis; to select a rational access; to determine the method of surgery; to prevent intraoperative errors and complications caused by age and topographic anatomical features of the region. use general and special surgical instruments, suture material; knowledge of surgical anatomy for rational choice approaches and surgical interventions; incisions of the skin, fascia, muscles, etc to take wounds on the skin, muscles, tendons; expose the vessels and nerves; to stitch, bandage in the wound blood vessels; incisions at the opening of abscesses (abscesses, phlegmons, lymphadenitis, panaritium etc.)

OPK-11: readiness for use of medical devices, provided by the procedures of medical care.

Know:	
Level 1	Anatomical and physiological, age-sexual and individual features of the structure and development of the human body; general principle of the layered structure of the human body;
Level 2	Topographic and anatomical justification of medical care
Level 3	topographical anatomy of specific areas; clinical anatomy of internal organs, cellular spaces, vascular and nervous formations, bones and large joints, abdominal wall weaknesses; collateral circulation in violation of the patency of the main blood vessels; areas of motor and sensitive innervation of large nerves; age-related features of the structure, shape and position of the organs; the most common malformations – the essence and principles of surgical correction;
Skills:	
Level 1	To highlight the practical importance of knowledge of topographic anatomy and operative surgery in the provision of medical care
Level 2	To use knowledge of topographic anatomy: to justify the diagnosis; to choose a rational access; to choose the method of surgery; to prevent intraoperative errors and complications caused by age and topographic and anatomical features of the area; to use general and some special surgical instruments.
Level 3	To prevent intraoperative errors and complications caused by age and topographic anatomical features of the area; use General and some special surgical instruments. perform surgical techniques and operations on biological materials, models and simulators.
Expertise:	
Level 1	Skills in determining the most important topographic and anatomical landmarks and practical skills in the provision of medical care. Skills palpation on the person of the main bone orientations, the definition of topographic contours of organs and major vascular and nerve trunks.
Level 2	Knowledge of topographic anatomy: to justify the diagnosis; to choose a rational access; to determine the method of surgery; to prevent intraoperative errors and complications caused by age and topographic and anatomical features of the area. Use general and special surgical instruments, suture material; knowledge of surgical anatomy for rational choice approaches and surgical interventions; incisions of the skin, fascia, muscles, etc; to take wounds on the skin, muscles, tendons; expose the vessels and nerves; to stitch, bandage in the wound blood vessels; incisions at the opening of abscesses (abscesses, phlegmons, lymphadenitis, panaritium, etc.) to perform a disarticulation of the phalanges of the fingers; perform venesection; to make a puncture and catheterization of Central venous (subclavian, internal jugular, femoral); to puncture large joints: shoulder, elbow, hip, knee, ankle; to make osteoperforation of large bones in osteomyelitis; to process bone, periosteum, muscles, vessels, nerves, skin during amputation of the limb; to do primary surgical treatment of wounds on the head, on the face; to make decompression trepanation of the skull;
Level 3	Use educational, scientific, popular science literature, the Internet for professional activities

Final Students' Competences

3.1	Knowledge:
<p>anatomical and physiological, age-sexual and individual features of the structure and development of the human body; the general principle of the layered structure of the human body; topographic anatomy of specific areas; clinical anatomy of the internal organs, cellular spaces and vascular-nervous structures, bones and large joints, weak places of the abdominal wall; collateral blood circulation in violation of the patency of the main blood vessels; area of motor and sensory nerve supply major nerves; age peculiarities of structure, form and position of organs; the most common malformations are their essence and principles of surgical correction; surgical instruments; indications, technique of performing simple emergency surgery: primary surgical treatment of wounds; cervical vagosympathetic blockade of A.V. Vishnevsky; resection trepanation of skull; tracheostomy; cryotomy; opening of the breast abscess; to puncture of the pleural cavity; to suture of the penetrating wound of the pleural cavity; pericardiocentesis; appendectomies; laparotomy and suturing of the abdominal wall wound. the essence of the operation, indications, the main stages of more complex emergency and planned surgery: joint puncture; principles of amputation and exarticulation; bone plastic trepanation of the skull; radical mastectomy; to suture the wounds of the heart; revision of the abdominal cavity; to suture the wounds of the stomach and intestines; gastroentero-, and enteroenteroanastomosis; to suture of wounds of parenchymal organs (liver, spleen, kidneys); revision of the pelvic organs; lumbar puncture; to puncture of the bladder, cystotomy and high section of the bladder; intrapelvic blockade by Shkolnikov - Selivanov; cesarean section; the operation for the hydrocele, when phimosis and paraphimosis; to puncture of the posterior vaginal vault, episiotomy, perineotomy.</p> <p>Skills: to use educational, scientific, popular science literature, the Internet for professional activities; to palpate the main bone reference points on the person, to outline the topographic contours of the organs and major vascular and nerve trunks. to use the knowledge of topographic anatomy: to substantiate the diagnosis; for a choice of rational access; to choose the method of surgery; to prevent intraoperative errors and complications caused by age and topographic and anatomical features of the region; to use general and some special surgical instruments.</p>	
3.2	Skills:
<p>to use educational, scientific, popular science literature, the Internet for professional activities; to palpate the main bone reference points on the person, to outline the topographic contours of the organs and major vascular and nerve trunks. to use the knowledge of topographic anatomy: to substantiate the diagnosis; for a choice of rational access; to choose the method of surgery; to prevent intraoperative errors and complications caused by age and topographic and anatomical features of the region; to use general and some special surgical instruments.</p>	

3.3 Expertise:

skills of palpation on the main bony landmarks, the definition of the topographic contours
organs and major vascular and nerve trunks.
the knowledge of topographic anatomy:
to substantiate the diagnosis;
to choose the rational access;
to determine the method of surgery;
to prevent intraoperative errors and complications caused by age and topographic and anatomical features of the region.
to use general and special surgical instruments, suture material;
to use knowledge of surgical anatomy to select rational approaches and surgical interventions;
to produce cuts of skin, fascia, muscle, etc.
to suture wounds on skin, muscles, tendons;
to expose the vessels and nerves.;

to perform incisions at the opening of abscesses (abscesses, phlegmons, lymphadenitis, panaritium etc.)
to perform exarticulation of the phalanges of the fingers;
to perform venesection;
to do puncture and catheterization of the main veins (subclavian, internal, jugular, femoral);
to puncture large joints: shoulder, elbow, hip, knee, ankle;
to make the osteoperforation of a major bone in osteomyelitis;
to process bone, periosteum, muscles, vessels, nerves, skin with amputation of the limb;
to do primary surgical treatment of wounds on the head, on the face;
to make decompression trepanation of the skull;
to do vagosympathetic novocaine blockade of Vishnevsky;
to do a spinal tap;
to perform a lower tracheotomy;
to perform a cryotomy;
to the right incisions are made at the autopsy purulent mastitis in adults and in children;
to do a puncture of the pleural cavity;
to do thoracocentesis and drain the pleural cavity;
to suture the wound to the chest;
to do intercostals novocaine blockade;
to puncture the pericardial cavity at Larrey;
to suture the heart for injuries;
to produce laparotomy: median, right and left hypochondrium;
to make laparocentesis for laparoscopic manipulation;
to perform the operation of herniation in inguinal hernias;
to perform the operation of herniation in umbilical hernias;
to suture wounds on the stomach, small and large intestine;
to impose unnatural anus;
to do appendectomy surgery;
to suture the perforating stomach ulcer;
to make a gastrostomy for Witzel, Toprover;
to perform the resection of the stomach Billroth I;
to suture the wound on the liver with injuries;
to perform cholecystectomy according to the classical method ("from the bottom" and " from the neck»);
to perform splenectomy;
to suture the wound on the spleen with injuries;
to be able to produce paranephral novocaine blockade;
to suture the wound on the kidney with injuries;
to drain the retroperitoneum;
to impose cystostomy;
to do the operation of Ross and Bergman with dropsy testicle;
to do the surgery, circumcision when phimosis;
to do the operation of bringing down the testicle with cryptorchidism.