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**Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
RUDN University**

Institute of Medicine

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

Topographic Anatomy and Operative Surgery

course title

Recommended by the Didactic Council for the Education Field of:

31.05.01 General Medicine

field of studies / speciality code and title

The course instruction is implemented within the professional education programme of higher education:

General Medicine

higher education programme profile/specialisation title

2022-2023

1. COURSE GOAL(s)

The goal of the course “Topographic anatomy and operative surgery” is to equip students with the necessary knowledge in the field of anatomy and surgery; to ensure basic knowledge and skills needed for future studies in the clinical departments and independent medical practice; to meet learning objectives.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) “Topographic anatomy and operative surgery” is aimed at the development of the following competences /competences in part : GPC-5.3; GPC-6.1; 6.3; PC-1.3.

Table 2.1. List of competences that students acquire through the course study

Competence code	Competence descriptor	Competence formation indicators (within this course)
GPC-5	Being able to assess morpho-functional, physiological conditions and pathological processes in the human body to solve professional tasks.	GPC-5.3. Being able to determine morpho-functional, physiological states and pathological processes of the human body.
GPC-6	Being able to organize patient care, provide primary health care, arrange work and make professional decisions in emergency conditions at the prehospital stage, in emergency situations, epidemics and in foci of mass destruction	GPC-6.1. Mastering the algorithm for providing first aid in emergency conditions, including in extreme conditions and foci of mass destruction.
		GPC-6.3. Being able to provide emergency medical care to patients in conditions that pose a threat to the life of a patient, including clinical death (cessation of the vital bodily functions (blood circulation and (or) breathing).
PC-1	Being able to provide emergency or urgent medical care to a patient.	PC-1.3. Being able to provide emergency medical care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient’s life.

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective* component of (B1) block of the higher educational programme curriculum.

* - Underline whatever applicable.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
GPC-5.3	Being able to determine morpho-functional, physiological states and pathological processes of the human body.	Biology; Anatomy; Histology, Embryology, Cytology; Normal Physiology; Biochemistry; Microbiology, Virology; Pathological Anatomy, Clinical Pathological Anatomy; Pathophysiology, Clinical Pathophysiology; General Surgery; Basics of Psychophysiology; Medical Enzymology; Basics of Integrative Medicine.	Dermatovenerology; Neurology, Medical Genetics, Neurosurgery; Faculty Surgery; Professional Diseases; Hospital Therapy; Hospital Surgery, Pediatric Surgery; Forensic Medicine; Anesthesiology, Resuscitation, Intensive Care; Oncology, Radiation Therapy; Maxillofacial Surgery. Practice in the Therapeutic Field: Physician's Assistant.
GPC-6.1; 6.3	<p>GPC-6.1. Mastering the algorithm for providing first aid in emergency conditions, including in extreme conditions and foci of mass destruction.</p> <p>GPC-6.3. Being able to provide emergency medical care to patients in conditions that pose a threat to the life of a patient, including clinical death (cessation of the vital bodily functions (blood circulation and (or) breathing).</p>	<p>Health and Safety; Propaedeutics of Internal Diseases; Immunology; General Surgery. Introductory Practice to Gain Primary Professional Skills and Professional Experience: Patients' Care (Center of Simulaton Trining); Introductory Practice to Gain Primary Professional Skills and Professional Experience: Patients' Care; Practice for Obtaining Primary Professional Skills: Assistant Nursing Staff; Practice to Gain Primary Professional Skills and Professional Experience: Assistant Ward Nurse.</p>	<p>Epidemiology; Faculty Surgery; Urology. Anesthesiology, Resuscitation, Intensive Care; Allergology; Disaster Medicine; Endoscopic Urology.</p>
PC-1.3	PC-1.3. Being able to provide emergency medical	Health and Safety; Propaedeutics of Internal Diseases;	Dermatovenerology; Neurology, Medical Genetics, Neurosurgery;

	care to patients with sudden acute diseases, conditions, exacerbation of chronic diseases without obvious signs of a threat to the patient's life.	Immunology; General Surgery. Practice in Emergency Medical Procedures (Center of Simulation Training).	Faculty Surgery; Ophthalmology; Urology; Hospital Therapy; Polyclinic Therapy; Hospital Surgery, Pediatric Surgery; Traumatology, Orthopedics; Endocrinology; Anesthesiology, Resuscitation, Intensive Care; Allergology; Disaster Medicine; Oncology, Radiation Therapy; Endoscopic Urology. Practice in the Surgical Field: Surgical Assistant; Practice in the Obstetric and Gynecologica Field: Gynecologist Assistant; Practice in the Therapeutic Field: Physician's Assistant; General Practitioner: Outpatient Physician's Assistant; Practice in the Obstetric and Gynecological Field: Obstetrician Assistant.
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* To be filled in according to the competence matrix of the higher education programme.

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course is _____ credits (_____ academic hours).

Table 4.1. Types of academic activities during the periods of higher education programme mastering (**full-time training**)*

Type of academic activities	Total academic hours	Semesters/training modules	
		6	7
Contact academic hours	140	72	68
including:			

Lectures (LC)			
Lab work (LW)			
Seminars (workshops/tutorials) (S)	140	72	68
<i>Self-studies</i>	76	36	40
<i>Evaluation and assessment (exam/passing/failing grade)</i>	216	108	108
Course workload	academic hours	6	3
	credits		3

* To be filled in regarding the higher education programme correspondence training mode.

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
Module 1. Topographic anatomy of the upper limbs	Topic 1.1. Topographic anatomy and operative surgery as a discipline. Applied anatomy: its main types. Operative surgery, its content and methods of studying. Fascias, cellular spaces and their clinical value.	S
	Topic 1.2. Shoulder girdle areas: subclavian, deltoid, scapular, axillary regions. Topographic anatomy of the shoulder and ulnar areas. Surgical anatomy of the shoulder and elbow joints.	S
	Topic 1.3. Topographic anatomy of the forearm and hand. Surgical anatomy of the wrist joint.	S
Module 2. Topographic anatomy of the lower limbs	Topic 2.1. Topographic anatomy of the gluteal region and thigh. Surgical anatomy of the femoral, obturator and adductor canals. Surgical anatomy of the hip joint.	S
	Topic 2.2. Topographic anatomy of the knee region, the popliteal fossa and shin. Topographic anatomy of the ankle joint region and foot. Surgical anatomy of the medial malleolus, calcaneal and plantar canals. Surgical anatomy of the knee joint, of the ankle joint.	S
Module 3. Topographic anatomy of the head, neck, thorax	Topic 3.1. Cranial vault. Frontal - parietal - occipital region. Temporal region. Meninges and intermembranous space. Topographic anatomy of the venous sinuses of the dura mater. Face. Superficial and deep lateral face regions.	S
	Topic 3.2. Fascias and fat spaces of the neck. The anterior neck region: submandibular triangle, carotid triangle, scalenovertebral triangle.	S

	Sternoclavicularmastoid region and lateral region of the neck. Surgical anatomy of the neck organs: the esophagus, trachea, thyroid gland.	
	Topic 3.3. Chest wall. Topography of intercostal spaces. The mammary gland. Thoracic cavity. Pleura and pleural sinuses	S
	Topic 3.4. Thoracic cavity. Surgical anatomy of the lungs. Mediastinum. Surgical anatomy of organs of the anterior and posterior mediastinum. Surgical anatomy of the diaphragm.	S
Module 4. Topographic anatomy of the abdomen	Topic 4.1. Topographic anatomy of the abdomen. Anterolateral wall of the abdomen. Weak points of the anterior abdominal wall. Linea alba and the umbilical ring. Inguinal region. Surgical anatomy of the inguinal canal. Surgical anatomy of the spermatic cord. Surgical anatomy of the inguinal, femoral and umbilical hernias.	S
	Topic 4.2. Topographic anatomy of the abdomen. Abdominal cavity. Peritoneum. Ligaments, bursae, channels, sinuses, great and small omentum. Surgical anatomy of upper floor of the abdominal cavity: stomach, duodenum, liver, gallbladder and extrahepatic bile ducts, spleen, pancreas.	S
	Topic 4.3. Topographic anatomy of the abdomen. Surgical anatomy of the lower floor of the abdominal cavity: small intestine, large intestine. Posterior abdominal wall. Musculoaponeurotic and fascial formation of posterior abdominal wall.	S
	Topic 4.4. Retroperitoneal space. Fascia and cellular spaces. Surgical anatomy of organs and neurovascular structures: the kidney, ureter, adrenal glands, abdominal aorta, vena cava inferior, thoracic lymph duct.	S
Module 5. Topographic anatomy of the pelvis and perineum	TOPIC 5.1. TOPOGRAPHIC ANATOMY OF THE PELVIS. FASCIA, CELLULAR SPACES. SURGICAL ANATOMY OF THE MALE PELVIS: THE RECTUM, URINARY BLADDER, URETER, PROSTATE, SEMINAL VESICLES, VAS DEFERENS. SURGICAL ANATOMY OF THE FEMALE PELVIS: THE RECTUM, UTERUS AND ITS APPENDAGES, THE BLADDER, URETER.	S

	<p>TOPIC 5.2. TOPOGRAPHIC ANATOMY OF THE PERINEUM. FASCIA, CELLULAR SPACES. PELVIC AND UROGENITAL DIAPHRAGM. SURGICAL ANATOMY OF THE PERINEUM IN MEN AND WOMEN: THE URETHRA, SCROTUM, TESTICLE, SPERMATIC CORD, VAGINA. OPERATIONS FOR WOUNDS OF THE RECTUM AND URINARY BLADDER. OPERATIONS FOR AN ECTOPIC (TUBAL) PREGNANCY.</p>	S
Module 6. Operative surgery	<p>Topic 6.1. Surgical instruments. Basic operational techniques: separation of tissues, stop bleeding, put on and removal of skin nodes sutures, tying surgical knots.</p>	S
	<p>Topic 6.2. Intestinal suture. Intestinal anastomoses. Suturing of wounds of the stomach, small intestine and colon. Resection of the small intestine. Intestinal suture. Anatomical and physiological basis. Types. Requirements for the seam.</p>	S
	<p>Topic 6.3. Surgical approach to abdominal cavity organs: traditional, endoscopic. Abdominal wall hernias. Hernioplastic operations. Operations in wounds of the liver. Extrahepatic biliary tract surgery. Cholecystectomy. Pancreatic surgery.</p>	S
	<p>Topic 6.4. Operations on abdominal cavity organs: tradition and laparoscopic. Revision of the abdominal cavity with penetrating wounds. Appendectomy. Operations on the stomach: gastrostomy, gastro-intestinal anastomosis (gastrojejunostomy), resection of the stomach. Operations on the stomach.</p>	S
	<p>Topic 6.5. Primary surgical treatment of wounds of the extremities. Amputation of limbs. Operations on the joints of the limbs. Operations on blood vessels of the limbs. Vascular suture. Anatomical and physiological basis. Types. Requirements for the seam. Operations on the peripheral nerves and tendons: suture of nerve, suture of tendon. Anatomical and physiological basis. Types. Requirements for the seam.</p>	S
	<p>Topic 6.6. Primary surgical treatment of head wounds. Trepanation of the skull. Operations on the thyroid gland. Tracheostomy. Operations in phlegmons and abscesses of the neck. Topographic-anatomic substantiation of incisions.</p>	S

	Topic 6.7. Operative access to the organs of the thoracic cavity. Operations on the breast. Principles of surgical interventions on lungs, heart, esophagus.	S
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* - to be filled in only for **full**-time training: *LC* - lectures; *LW* - lab work; *S* - seminars.

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Lab work	Classroom for seminars (workshops), group and individual consultations, interim and mid-term assessments, equipped with a set of specialized furniture; whiteboard (screen) and multimedia presentation equipment.	<p>List of visual anatomical posters, tables, models, bas-reliefs. plastinated materials (preserved (cadaveric) plastinated biomaterial); wet anatomical specimens (preserved (cadaveric) biomaterial in formalin solution in glass containers).</p> <p>Technology support: Epson EMP-S1 multimedia projector; a stable wireless Internet connection.</p> <p>Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), Skype.</p>
Seminar	Classroom for seminars (workshops), group and individual consultations, interim and mid-term assessments, equipped with a set of specialized furniture; whiteboard (screen) and multimedia presentation equipment.	<p>Set of specialized equipment: operating microscope "Carl Zeiss Jena"; endovideosurgical complex "Azimuth"; anatomical table "Anatmage" (interactive 3D-visualization, 3D-visualization table); sets of general and special surgical instruments; visual posters, tables, stands.</p> <p>Technology support: NEC VT59 multimedia projector; stable wireless Internet connection.</p>

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
		Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), Skype.
Seminar	Classroom for seminars (workshops), group and individual consultations, interim and mid-term assessments, equipped with a set of specialized furniture; whiteboard (screen) and multimedia presentation equipment.	Set of specialized furniture: desk with faux stone top; portable shadowless lamp. Negatoscope H-48. Technology support: Epson EB-W29 multimedia projector, stable wireless Internet connection. Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), Skype.
Self-studies	Classroom for seminars (workshops), group and individual consultations, interim and mid-term assessments, equipped with a set of specialized furniture; whiteboard (screen) and multimedia presentation equipment.	Technology support: Epson EMP-S1 multimedia projector, internet access. Software: Microsoft Windows, MS Office / Office 365, MS Teams, Chrome (latest stable release), Skype. Simulators for operative surgery: human skin, vascular, intestinal simulator, suture kits, surgical instruments.

* The premises for students' self-studies are subject to **MANDATORY** mention

7. RESOURCES RECOMMENDED FOR COURSE STUDY

Main readings:

- 1) Netter's Clinical Anatomy / J.T. Hansen, F.H. Netter. - 4th Edition. - Philadelphia: Elsevier, 2019. - 588 p.
- 2) Gray's Anatomy for Students / R.L. Drake, W.A. Vogl, Mitchell Adam W.M. - Third Edition. - Philadelphia: Elsevier, 2015. - 1161 p.: il.

Electronic full-text materials:

- 1) Topographic anatomy and operative surgery: textbook/A.V.Nikolaev.-Moscow.-Geotar-Media, 2019.

http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=497916&idb=0

Additional readings:

Printed publications:

- 1) Atlas of human anatomy/ F.H. Netter. - 6th ed.; International edition. - Philadelphia: Saunders : Elsevier, 2014. - 591 p.: il.

Electronic full-text materials:

8. General surgery. The manual/ V.K. Gostishchev. - Moscow.-Geotar-Media, 2020.
http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn_FindDoc&id=497901&idb=0

Internet (based) sources

1. ELS of RUDN University and third-party ELS, to which university students have access:

- <http://lib.rudn.ru/MegaPro/Web>
- <http://www.biblioclub.ru>
- <http://www.biblio-online.ru>
- www.studentlibrary.ru
- <http://e.lanbook.com/>

2. Databases and search engines:

- <http://docs.cntd.ru/>
- <https://www.yandex.ru/>
- <https://www.google.ru/>
- <http://www.elsevierscience.ru/products/scopus/>

*Training toolkit for self- studies to master the course *:*

1. The set of lectures on the course “Topographic Anatomy and Operative Surgery”
2. The laboratory workshop (if any).on the course “Topographic Anatomy and Operative Surgery”
3. The guidelines for writing a course paper / project (if any) on the course “Topographic Anatomy and Operative Surgery”.
4.

* The training toolkit for self- studies to master the course is placed on the course page in the university telecommunication training and information system under the set procedure.

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS' COMPETENCES LEVEL UPON COURSE COMPLETION

The assessment toolkit and the grading system* to evaluate the competences formation level (GPC-5.3; GPC-6.1; 6.3; PC-1.3) upon the course study completion are specified in the Appendix to the course syllabus.

* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

DEVELOPERS:

Associate Professor of the
Department of Operative
surgery and Clinical anatomy
named for I.D. Kirpatovsky

position, department

signature

D.L. Titarov

name and surname

Head of laboratory of the
Department of Operative
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HEAD OF EDUCATIONAL DEPARTMENT:

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**HEAD
OF HIGHER EDUCATION PROGRAMME:**

First Deputy Director of MI for
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I.V.Radish