MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
BELARUSIAN STATE MEDICAL UNIVERSITY

APPROVED
by Rector of the Educational Institution «Belarusian State Medical University»
S.P.Rubnikovich
26.06.2024
Reg.# UD-094-103/2425/edu.

TOPOGRAPHIC ANATOMY AND OPERATIVE SURGERY

Curriculum of the educational institution in the academic discipline for the specialty

7-07-0911-03 «Dentistry»

2024

Curriculum is based on the educational program «Topographic Anatomy and Operative Surgery», approved 26.06.2024, registration # УПД-091-103/2425/уч.; on the educational plan in the specialty 7-07-0911-03 «Dentistry», approved 15.05.2024, registration # № 7-07-0911-03/2425/mf.

COMPILERS:

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RECOMMENDED FOR APPROVAL:

by the Department of Human Morphology of the educational institution «Belarusian State Medical University»
(protocol # 10 of 10.05.24);

by the Scientific and Methodological Council of the educational institution «Belarusian State Medical University»
(protocol #18 of 26.06.2024)

EXPLANATORY NOTE

«Topographic Anatomy and Operative Surgery» – the academic discipline of the Morphology module, which contains systematized scientific knowledge about the layered structure of human body regions, organs topography, methods and rules of surgical operation.

The aim of the discipline «Topographic Anatomy and Operative Surgery» is the formation of basic professional competencies for acquisition by students of scientific knowledge about the layered structure of the head and neck regions, mastering certain surgical skills and familiarity with the main surgical interventions on the head and neck, performed according to vital indication.

The objectives of the discipline «Topographic Anatomy and Operative Surgery» are to form students' scientific knowledge about stratified structure of the head and neck regions and its constituent anatomical structures in relation to their nerve and blood supply; technique for performing general surgical interventions on the head and neck;

skills and abilities required for:

explaining the clinical symptoms of diseases localized in the head and neck regions, choosing rational methods for their surgical treatment;

use of the surgical instruments of general purpose.

The knowledge, skills, and abilities acquired during the study of the academic discipline «Topographic Anatomy and Operative Surgery» are necessary for successful mastering of the discipline «Propaedeutics in Dentistry», modules «General Clinical Surgical» and «Oral and Maxillofacial Surgery».

Studying the educational discipline «Topographic Anatomy and Operative Surgery» should ensure the formation of students' basic professional competency: identify the main anatomical structures (vessels, nerves, muscles and bones) in the head and neck; use general surgical instruments when putting various types of surgical sutures.

As a result of studying the discipline «Topographic Anatomy and Operative Surgery» the student should

know:

layered structure of the topographic regions of the head and neck;

features of blood supply, regional lymph drainage and innervation of the anatomical structures of the head and neck;

synotopy and holotopy of the organs of the head and neck;

purpose and rules for using surgical instruments;

types of local anesthesia used in dental practice;

rules of medical ethics and deontology;

be able to:

choose the optimal method of treatment of diseases localized in the head and neck;

use general surgical instruments;

apply and remove skin sutures, perform surgical knots.

master:

methods of dissection, separation and connection of tissues using appropriate surgical instruments;

skills in performing tracheostomy, primary surgical treatment of head and neck wounds, drainage phlegmon and abscesses.

Total number of hours for the study of the discipline is 108 academic hours. Classroom hours according to the types of studies: lectures – 6 hours (including 3 hours of supervised student independent work (SSIW)) , practical classes – 51 hours, student independent work (self-study) – 51 hours.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of a credit (3 semester).

Form of higher education – full-time.

ALLOCATION OF ACADEMIC TIME ACCORDING TO SEMESTERS OF STUDY

Code, name of the specialty	semester	Number of academic hours						Form of intermediate assessment
		total	in-class	including			out-of-class self-studies	
				lectures	supervised student independent work	practical classes		
7-07-0911-03 «Dentistry»	3	108	57	3	3	51	51	credit

THEMATIC PLAN

Section (topic) name	Number of class hours	
	lectures	practical
1. Topographic anatomy of the neck	**-**	**16**
1.1.Superficial anatomy of the neck. Fascia and spaces of the neck. Rules of medical ethics and deontology	-	4
1.2. Anterior neck region	-	4
1.3.Sternocleidomastoid region of the neck	-	4
1.4.Lateral region of the neck	-	4
2. Topographic anatomy of the head	**3**	**23**
2.1.Superficial anatomy of the head. Anterior section of the facial region of the head	1,5	11
2.2.Lateral region of the facial part of the head	1,5	4
2.3.Neurocranium	-	8
3. Operative surgery	**3**	**12**
3.1.General issues of operative surgery	1,5	4
3.2.Operational techniques performed on the neck	1,5	4
3.3.Operational techniques performed on the head	-	4
Total hours	**6**	**51**

CONTENT OF THE EDUCATIONAL MATERIAL

1. Topographic anatomy of the neck

1.1. Superficial anatomy of the neck. Fascia and spaces of the neck. Rules of medical ethics and deontology

Rules of medical ethics and deontology.

Borders of the neck, division into regions and projection of the main anatomical structures. Anterior, sternocleidomastoid and posterior regions of the neck. The main bone and cartilage landmarks: hyoid bone, jugular notch of the sternum, thyroid, cricoid cartilages, tracheal rings. Projection on the skin of the subclavian, external carotid arteries; internal, external and anterior jugular vein; branches of the cervical and the brachial plexus. Places of finger pressing of arteries. Projection of the superficial lymph nodes of the neck.

Fascia of the neck: classification of the fascia of the neck according to V.N. Shevkunenko and according to the International anatomical terminology. Interfascial spaces of the neck: closed, open. The clinical significance of the fasciae of the neck: connection with the spaces of the head, mediastinum, axillary and supraspinous fossae.

1.2. Anterior neck region

Suprahyoid region: borders, layered structure of the submandibular and submental triangles. Submandibular gland: topography, fascial sac of the submandibular gland, topography of the submandibular duct. Muscles of the floor of the mouth: innervation and

blood supply. Intermuscular fissures of the floor of the mouth. Sublingual space: borders, contents.

Infrahyoid region: borders, triangles. Carotid triangle: layered structure. Structural components of the main neurovascular bundle of the neck. Place of palpation and digital pressure of the common carotid artery to temporarily hemostasis. Omotracheal triangle: layered structure. Topography of the neck organs: larynx, cervical part of the trachea, thyroid and parathyroid glands, pharynx, cervical part of the esophagus.

1.3. Sternocleidomastoid region of the neck

Borders of the sternocleidomastoid region, layered structure. Topography of the skin branches of the cervical plexus, external jugular vein. Carotid sheath and elements of the main neurovascular bundle of the neck; its relations in the upper, middle and lower thirds of the sternocleidomastoid region. Deep lateral lymph nodes of the neck. Topography of the branches of the cervical ganglions of the sympathetic trunk. Prescalene space: boundaries, content. Topography of the phrenic and vagus nerves.

Scalenevertebral triangle: borders, content. Subclavian artery: divisions, topography of branches. Place of digital pressing of the subclavian artery. Jugular venous angle: sources of formation, relationships with other neurovascular structures. Thoracic and right lymphatic ducts: topography, sources of formation.

1.4. Lateral region of the neck

Borders and layered structure of the omoclavicular and omotrapezoid triangles. Fascia, spaces and its contents. Interscalene space: boundaries, contents (subclavian artery, brachial plexus). Supraclavicular lymph nodes.

2. Topographic anatomy of the head

2.1. Superficial anatomy of the head. Anterior region of the facial part of the head

The border of the head and neck, the division of the head into the facial and neurocranium sections. Head regions and projection of the main anatomical structures. The main bone landmarks: supraorbital and infraorbital edges, zygomatic arch, mastoid process, supraorbital notch, infraorbital and mental foramen. Projection on the skin of the facial, superficial temporal and occipital arteries, branches of the facial nerve. Blood supply and innervation of the scalp. Places of localization of target points for performing block anesthesia.

Oral region. Rima oris and lips. The layered structure of the lips and the characteristics of the layers: skin, muscles, submucosa, mucous membrane. Sources of blood supply and innervation of the upper and lower lips. The boundaries of the vestibule of the oral cavity, the upper and lower arches, the frenulum of the upper and lower lips, the topography of the parotid duct. Oral cavity proper. Age and individual features of the structure of the maxilla and mandibula. Trajectories and buttresses.

Teeth. Layered structure of the hard and soft palate. The relief of the mucous membrane of the floor of the oral cavity, the topography of the submandibular sublingual ducts. Tongue. Sources of blood supply and innervation, lymph drainage from the walls and organs of the oral cavity proper.

Orbit: bones, canals, fissures, foramina, fossas, contents. Muscles of the eyeball, sources of innervation. Ophthalmic artery, superior and inferior ophthalmic veins. Ciliary ganglion, topography, branches, area of innervation. Eyeball: inner tunics of the eyeball. Fascial sheath of eyeball. Orbit fat body, connections with the spaces of the face. Layered structure of the eyeball. Lacrimal gland, tracts of the outflow of tears.

Nasal region, borders. External nose, layered structure, innervation and blood supply of the skin of the nose. Nasal cavity: bones, conchas and nasal meatuses. Connection nasal cavity with the paranasal sinuses and the orbital cavity. Blood supply and innervation of the nasal mucosa. Topography of the paranasal sinuses, blood supply and innervation of the mucous membrane. The ratio of the roots of the upper molars with the maxillary sinus.

2.2. Lateral region of the facial part of the head

Buccal region: borders, layered structure and characteristics of anatomical structures: greater and lesser zygomatic muscles, risorius muscles, levator anguli oris muscle. The course of the branches of the facial artery. Facial vein: tributaries, anastomoses. Buccal fat pad. Buccinator. Spaces: buccal and canine fossa; its communications with other spaces of the head.

Parotidomasticatory: borders, layered structure. Projection on the skin of the parotid gland and its excretory duct. The bed and the parotid gland space, its connection with the lateral parapharyngeal space. Topography of vessels and nerves lying in the thickness of the gland. Masseter, blood supply and innervation. Layered structure of the area in the projection of the masseter muscle.

Deep lateral region of the face. Borders, bone walls of the infratemporal and pterygopalatine fossa. Contents: lateral and medial pterygoid muscles, tendon of temporal muscle, maxillary artery, pterygoid plexus, mandibular nerve. Temporopterygoid and pterygomandibular spaces:contents. Borders of the parapharyngeal space, division into departments: retropharyngeal and lateral pharyngeal spaces. The relationship of spaces of the deep lateral region spaces with other spaces.

2.3. Neurocranium

Fronto-parietal-occipital region: borders, layered structure. Localization of spaces. The occipitofrontalis muscle. Features of the structure and development of the bones of the cranial vault. Sources of blood supply and innervation of the anatomical structures of the fronto-parieto-occipital region.

Temporal region and mastoid region: borders, layered topography; spaces and its connection with the spaces of neighboring regions. Shipo's trepanation triangle. Projection on the region of the mastoid process of the facial nerve canal, sigmoid sinus, mastoid antrum**.**

Internal base of the skull: topography of the anterior, middle and posterior cranial fossae. Dura mater, pia mater, arachnoid, sinuses; subarachnoid space, ventricles of the brain, cisterns. Pathways of circulation of cerebrospinal fluid. Blood supply to the brain.

3. Operative surgery

3.1. General issues of operative surgery

Stages of surgical intervention. Types of surgical operations. Primary and secondary treatment of a surgical wound. Delimitation of the surgical field and isolation of the edges of the surgical wound. Surgical instruments and rules for their use; special instruments used in operations on the head and neck. Rules and methods of dissection/connection of tissues. Ligation and suturing of vessels clamped with hemostatic clamps. Characteristics of modern suture material.Types of knots: simple, surgical, square. Removal of the skin suture.

Types of local anesthesia (application, infiltration and block anesthesia). Features of anesthesia during operations on the organs of the maxillofacial region.

3.2 Operational techniques performed on the neck

Methods of temporary and permanent hemostasis: application of a hemostatic clamp and ligation of the vessel in the wound; ligation of the vessel throughout, vascular suture.

Neck operations. Incisions for phlegmon and abscesses of the neck. Surgical access to the organs of the neck. Features of surgical treatment of neck wounds. Exposure and ligation of the external carotid artery in the carotid triangle. Conicotomy. Upper/lower tracheostomy: indications, surgical technique; possible complications. Vagosympathetic block: indications, technique; signs indicating the effectiveness of implementation.

3.3. Operational techniques performed on the head

Operations on the facial part of the head. Types of block anesthesia of the trigeminal nerve branches. Target points for anesthesia of the inferior alveolar nerve, mental, infraorbital, nasopalatine, palatine, tuberal and buccal anesthesia. Rules and stages of surgical treatment of wounds of the maxillofacial region. Typical incisions for abscesses and phlegmon of the maxillofacial region. Resection of the maxilla and mandibula.

Neurocranium operations. Rules for the surgical treatment of craniocerebral wounds. Technique of hemostasis in case of damage to the soft tissues of the cranial vault, middle meningeal artery, sinuses of the dura mater of the brain. Trepanation of the mastoid process. The concept of resection and osteoplastic craniotomy.

ACADEMIC DISCIPLINE CURRICULAR CHART

Section, topic #	Section (topic) name	Number of hours		Supervised student independent work	Practical skills	Form of control	
		lectures	practical			of practical skills	of current / intermediate assessment
	3 semester						
	Lectures	**3**	**-**	**3**			
3.1	1. Subject and tasks of topographic anatomy and operative surgery. Neck operations	1,5	-	-			
2.1	2. Operative technique at the facial part of the head	-	-	1,5			preparation and presentation of abstracts; presentation of reports; computer testing
2.2	3. Topography of the deep facial region	-	-	1,5			preparation and presentation of abstracts; presentation of reports; computer testing
3.3	4. Topography of fronto-parieto-occipital region	1,5	-	-			
	Practical lessons	-	**51**	-			
3.1	**General issues of operative surgery** 1**.** Basic concepts of operative surgery: surgical access, operative procedure, way out of the operation. 2. Classification of surgical operations by	-	4	-	1. Use of general surgical instruments. 2. Tie simple knot 3. Tie surgeon's knot 4. Tie square knot	1.Performing selection of surgical instruments for general surgical	Interview, tests

	purpose and timing. 3. Methods of anesthesia in surgery: general and local anesthesia. 4. Characteristics of the main types of local anesthesia (application, infiltration, block, spinal anesthesia). 5. Technique for performing infiltration anesthesia. 6. Surgical instruments: classification. **7**. General characteristics of instruments for dissection. 8. General characteristics of instruments for hemostasis. 9. General characteristics of grasping instruments. 10. Connecting tissues: tools and materials; basic principles of wound closure. The concept of primary and secondary sutures. 11. Classification and main characteristics of the suture material. 12. Surgical knots: simple (female), surgical, square					procedures 2.Performing simple knot on model for the learning of tying surgical knots 3.Performing simple knot on model for the learning of tying surgical knots t 4.Performing simple knot on model for the learning of tying surgical knots	
1.1	**2. Superficial anatomy of the neck. Spaces and fascia of the neck** 1. Upper and lower border of the neck. 2. Projection on the skin of the neck of the following anatomical formations: common, external, internal carotid and subclavian arteries; sensitive branches of the cervical plexus; supraclavicular part of the brachial plexus; phrenic nerve; submandibular gland; isthmus of the thyroid gland; internal, external and anterior jugular veins. 3. Division of the neck into regions; boundaries.	-	4	-			Express-interview in practical class; tests; control work; account of practical exercise; electronic tests; assessment using virtual simulators; filling out flash cards

	4. The borders of the triangles of the neck. 5. Superficial, suprahyoid, infrahyoid and deep muscles of the neck: origin and insertion, function; blood supply and innervation. 6. Topography of the spaces of the neck, communication with the spaces of other areas of the human body. 7. Classification of the fascia of the neck according to V. N. Shevkunenko. 8. Classification of the fasciae of the neck according to the International anatomical terminology. 9. Places of fixation of fascia on the bones, its relative positions. 10. Topography of spaces of the neck, communication with spaces of other areas of the human body						
1.2	3. **Anterior region of the neck** 1. The boundaries of the suprahyoid region of the neck and the triangles. 2. Layered structure of the submandibular triangle; topography of the vessels and nerves lying in it. 3. Submandibular gland: structure, blood supply and innervation; topography of the submandibular duct; submandibular space. 4. Lingual triangle (Pirogov's triangle): borders; topography of the lingual artery and vein. 5. Layered structure of the submental triangle. 6. Intermuscular fissures of the floor of the mouth. 7. The boundaries of the sublingual space and the topography of the anatomical structures located in it. 8. Structure, blood supply, innervation of the sublingual gland. Topography of the major and minor sublingual ducts.	-	4	-	Apply simple interrupted suture	Performing simple interrupted suture on model for the learning of sutures	Express-interview in practical class; control work; account of practical exercise; electronic tests; assessment using virtual simulators; filling out flash cards

	9. The boundaries of the sublingual region and the triangles included in its. 10. Borders and layered structure of the carotid triangle. 11. Structural components of the main neurovascular bundle of the neck and its relative positions						
1.3	**4. Sternocleidomastoid region of the neck** 1. Borders and layered structure of the sternocleidomastoid region, topography of the elements of the main neurovascular bundle of the neck. 2. Borders and contents of the scaleno-vertebral triangle. 3. The course of the subclavian artery, its divisions, branches. 4. Course and branches of the vertebral artery. 5. Course and branches of the internal thoracic artery. 6. Thyrocervical trunk: topography; branches and areas of its branching. 7. Boundaries and content of the interscalene space (triangle) and prescalene space. 8. Indications and technique for performing catheterization of the subclavian vein. Indications for cannulation of the thoracic duct. 10. Structure and topography of the cervical sympathetic trunk. 11. Topography and branches of the upper, middle cervical and cervicothoracic ganglions of the sympathetic trunk, branches and zones of innervation	-	4	-			Express-interview in practical class; control work; account of practical exercise; electronic tests; assessment using virtual simulators; filling out flash cards
1.4	**5. Lateral region of the neck** 1. Borders of the lateral region of the neck. 2. Layered structure of the omoclavicular	-	4	-			Express-interview in practical class; control work;

	triangle 3. Layered structure of the omotrapezoid triangle. 3. Space of the lateral triangle of the neck. 4. Interscalene space: boundaries, contents (subclavian artery, brachial plexus) 5.Jugular venous angle: topography, sources of formation, relationships with other neurovascular structures						account of practical exercise; electronic tests; assessment using virtual simulators; filling out flash cards
3.2	**6. Operational techniques performed on the neck. Review of the topography of the vessels, nerves, muscles and organs of the neck** 1. Types of hemostasis from the main arteries of the systemic circulation. 2. Differences between direct and indirect surgical access to the arteries. 3. Indications for ligation of the external carotid artery. 4. Technique of indirect access to the external carotid artery. 5. Absolute and relative indications for tracheostomy. 6. The main stages of tracheostomy. Differences in the technique of performing upper and lower tracheostomy. 7. Possible early and late complications of tracheostomy and ways to prevent them. 8. Surgical treatment of abscesses and phlegmon of the neck: suprasternal space, lateral triangle of the neck, neurovascular bundle of the neck, previsceral and retrovisceral spaces. 9. Drainage of phlegmon of the submental, submandibular triangle and the floor of the mouth. 10. Congenital malformations (cysts and fistulas of the neck): sources of formation, methods of	-	4	-	1.Apply a horizontal mattress suture 2.Apply a vertical mattress suture	1. Performing a horizontal mattress suture on model for the learning of sutures 2. Performing a vertical mattress suture on model for the learning of sutures	Interview, tests; colloquium*

	treatment. 11. Indications, technique and objective signs of the effectiveness of vagosympathetic block						
2.1	**7. Topography of the buccal and infraorbital region. Primary surgical treatment of wounds of the facial section of the head** 1 Buccal and infraorbital region: borders, layered structure. 2. Spaces: buccal and canine fossa. Buccal fat pad. Possible ways of spreading infection from the buccal region. 3. Requirements for the primary surgical treatment of wounds of the facial section of the head. 4. The main stages and features of the primary surgical treatment of wounds of the facial section of the head. 5. General principles for closing wounds in the facial region of the head (needles, suture material, types of sutures). 6. Surgical treatment of phlegmons and abscesses of the face of an odontogenic reason: places of skin incisions at autopsy; the main stages of the operation. 7. Types of skin-plastic operations performed to close extensive defects on the face	-	3	-	1.Apply a cosmetic(intradermal) suture 2.Use Deschamps' and Cooper' ligature needles	1.Performing a cosmetic(intradermal) suture on model for the learning of sutures 2. Performing hemostsasis on model for the learning of sutures	Interview, tests; filling out flash cards
2.1	**8.Topography of the parotidomasseteric region** 1.Boundaries and layers of the parotidomasseteric region. 2.Parotid gland: topography; parts, parotid duct and accessory parotid gland. 3.Parotid fascia: border, location; parotid space. Life threatening complication of parotid space infections.	-	4	-	Apply a blanket suture	Performing blanket suture on model on model for the learning of sutures	Express-interview in practical class; control work; account of practical exercise; electronic tests; assessment using virtual simulators; filling out flash

	4.Relationships of the parotid gland with blood vessels and nerves including facial and auriculotemporal nerves, external carotid artery, retromandibular and internal jugular veins. 5.Parotid gland: blood and nerve supply; venous and lymphatic drainage. 6.Masseter muscle: anatomy; function; blood and nerve supply; submasseteric space. 7.Phlegmons and abscesses of the parotidomasseteric region: milestones of the surgical procedure; potential complications and their prevention						cards
2.1	**9. Morphology of the permanent dentition: incisors, canines, premolars, molars. Numbering systems (dental formulas). Eruption schedule of deciduous teeth** 1. Surfaces of the anterior teeth. 2.Occlusal surface/incisal edge of a crown: cusps, a cingulum, tubercles, ridges, fissures, and fossa. 3. Equator of a tooth. Clinical significance. 4.Morphological features of the maxillary and mandibular incisors: crown shape and outline pulp chamber features. 5.Maxillary and mandibular canines: crown shape and outline; pulp chamber features. 6.Maxillary and mandibular premolars: crown shape and outline; pulp chamber features. 7. The Maxillary and mandibular first molars: crown shape and outline; the names and number of roots. 8. Maxillary and mandibular second molars: crown shape and outline, the names and number of roots. 9.Maxillary and mandibular third molars: crown	-	4	-			Express-interview in practical class; control work; account of practical exercise; electronic tests; assessment using virtual simulators; filling out flash cards

	shape and outline; the names and number of roots. 10.Numbering systems (dental formulas) used for deciduous teeth. 11.Eruption schedule of deciduous teeth. 12.Mixed dentition: time frames. 13.Primary (deciduous) incisors: crown, root and pulp chamber morphology. 14. Primary (deciduous) canines: crown, root and pulp chamber morphology. 15.Primary (deciduous) molars: crown, root and pulp chamber morphology surfaces						
2.2	**10.Topography of the deep facial region** 1. Deep facial region: boundaries; location, contents, and communications of the deep temporal, infratemporal, and pterygomandibular spaces. 2. Pterygopalatine fossa: boundaries, passages, contents. 3. Anatomical structures of the deep facial region. 4. Lateral and medial pterygoid muscles: origin and insertion; actions; blood supply and innervation. 5. Maxillary artery: parts, and topography; branches and supplied anatomical structures. 6. Topography of the maxillary nerve and its branches. Superior dental plexus. 7. Topography of the mandibular nerve and its branches. Inferior dental plexus. 8. Lateral pharyngeal and retropharyngeal spaces: location and communication with another fascial spaces of the head and neck. 9. Most common sources of deep facial region spaces infections. Potential pathways of infection spread	-	4	-			Interview, account of practical exercise; electronic tests; assessment using virtual simulators; filling out flash cards

2.3	**11. Neurocranium. Topography of the fronto-parietal-occipital and temporal regions** 1. The border of the facial part of the head and neurocranium. Regions of neurocranium. 2. Skeleton of neurocranium. The bone base of the temporal region. Features of the structure of the squamous part of the temporal bone. 3. External and external base of the skull: foramina, canals and its contents. 4. Projection on the skin of the temporal and occipital arteries; supraorbital, auriculotemporal and lesser occipital nerves. 5. Borders and layered structure of the fronto-parieto-occipital region. 6. Blood supply, innervation and lymph drainage from the skin of the fronto-parieto-occipital region. Anatomical landmarks for block anesthesia. 7. The occipito-frontalis muscle: origin and insertion, function, blood supply and innervation. 8. Spaces of the fronto-parieto-occipital region. Localization of hemorrhages in injuries of the fronto-parieto-occipital region. 9. Features of the macro- and microscopic structure of the bones of the cranial vault. Types of sutures. 10. Meninges; localization of the subdural and subarachnoid space. 11. Topography of the external and internal base of the skull 12. Ways of circulation of cerebrospinal fluid. 13. Anastomoses between the sinuses of the dura mater and the veins of the soft tissues of the	-	4	-			Interview, account of practical exercise; electronic tests; assessment using virtual simulators; filling out flash cards

	head. Diploic and emissary veins. 14. Borders and layered structure of the temporal region. 15. Temporal muscle: origin and insertion, functions, blood supply and innervation. 16. Localization and characteristics of the spaces of the temporal region						
3.3	**12. Operational techniques performed on the head** 1. Requirements for the primary surgical treatment of wounds of the facial section of the head. 2. The main stages and features of the primary surgical treatment of wounds of the facial part of the head. 3. General principles for closing wounds in the facial region of the head (needles, suture material, types of sutures). 4. Places of skin incisions for drainage phlegmons and abscesses of an odontogenic reasons, the main stages of the operation. 5. Types of skin-plastic operations performed to close extensive defects on the face. 6. The main stages of primary surgical treatment of wounds of the neurocranium, the rules for excising the edges of the wound. Features of imposing a hemostatic clamp on the vessels in the subcutaneous tissue of the fronto-parieto-occipital region. 7. Plastic and reconstructive operations on the head. 8. Indications for craniotomy. 9. Sources of epidural hematoma formation, places of its localization.	-	4	-	Removal of intradermal suture	Removal of intradermal suture on model for the learning of surgical sutures	Interview, tests

	10. Topography of the middle meningeal artery and its branches. 11. Methods of craniotomy. The main stages of the operation. 12. Types of hemostasis from the sinuses of the dura mater						
2.3	**13**. **Topographical anatomy of the region of the mastoid process** 1**.** Mastoid region: boundaries and layers. 2.Suprameatal triangle: boundaries. Relations of its anteroinferior, superior and posterior borders with the floor of the middle cranial fossa, facial nerve canal, and sigmoid sinus. 3.Scalp laceration: assessment, wound management, types of sutures	**-**	4	**-**	Applying a hemostatic clamp in the wound and ligating the bleeding vessel	Performing a hemostatic clamp in the wound and ligating the bleeding vessel	Interview, tests; colloquium*,
							credit
	Total hours	**3**	**51**	**3**			

*This is a mandatory form of current certification

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Стенько, А. А. Топографическая анатомия и оперативная хирургия / А. А.Стенько. – Минск : Новое знание, 2022.– 384 с.

Additional:

2. Tsyhykalo, O. V. Topographical anatomy and operative surgery : textbook for English- speaking foreign students / O. V. Tsyhykalo . – 2nd ed. – Vinnytsia : Nova Knyha, 2017, 2018. – 528 p.
3. Кабак, С. Л. Практикум по анатомии человека: «Clinical anatomy: head and neck Anatomy work book»: практикум для самостоятельной работы студентов 1 курса МФИУ, обучающихся на английском языке/ С. Л. Кабак. – 7-е изд., испр,доп. – Минск : БГМУ, 2023. – 88 с.
4. Клюй, Е. В. Топографическая анатомия и оперативная хирургия шеи = Topographic anatomy and operative surgery of the neck: учеб.- метод. пособие. – Минск : БГМУ, 2018. – 20 с.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

The time allocated for independent work can be used by students for:

independent work with basic and additional literature for preparing for practical classes;

studying tasks in eTest system;

preparing for lectures, practical classes;

preparing for colloquiums, tests and credit in the academic discipline;

studying the topics (issues) designed for independent work;

performing research and creative tasks;

preparing thematic reports, abstracts, presentations;

performing practical tasks in manual book;

ccomputer tests;

taking notes of educational literature;

preparing reports;

compiling a review of scientific literature on a given topic;

making models, laboratory teaching aids;

compilation of a thematic selection of literature sources, Internet sources;

preparation of tests by students for the organization of mutual knowledge assessment.

METHODOLOGICAL RECOMMENDATIONS FOR THE ORGANIZATION AND PERFORMANCE OF SUPERVISED STUDENT INDEPENDENT WORK IN THE ACADEMIC DISCIPLINE

Main forms of supervised student independent work**:**
preparation and presentation of abstracts;
presentation of reports;
computer testing;
watching video lectures.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms are used for competence assessment:
express-interview in practical class;
interview
colloquium;
tests;
control work;
account of practical exercise;
electronic tests;
assessment using virtual simulators;
filling out flash cards;
performing practical skills on model for the learning of surgical sutures;
performing practical skills for the learning of tying surgical knots.

LIST OF AVAILABLE TEACHING METHODS

Traditional method;
Active (interactive) methods:
training based on simulation technologies;
Problem-Based Learning (PBL);
Research-Based Learning (RBL).

LIST OF PRACTICAL SKILLS

Name of practical skills	Form of practical skills control
1. Use of general surgical instruments	Performing selection of surgical instruments for general surgical procedures
2. Tie a simple knot	Performing simple knot on model for the learning of tying surgical knots
3. Tie a square knot	Performing square knot on model for the learning of tying surgical knots
4. Tie a surgical knot	Performing surgical knot on model for the learof tying surgical knots
5. Apply simple interrupted suture	Performing simple interrupted suture on model for the learning of sutures

6. Apply a blanket suture	Performing blanket suture on model on model for the learning of sutures
7. Apply a horizontal mattress suture	Performing horizontal mattress suture on model for the learning of sutures
8. Apply a vertical mattress suture	Performing vertical mattress on model for the learning of sutures
9. Apply a cosmetic (intradermal) suture	Performing a cosmetic (intradermal) suture on model for the learning of sutures
10. Removal of intradermal sutures	Removal of intradermal sutures on model for the learning of sutures
11.Use Deschamps' and Cooper' ligature needles to stop bleeding from damaged vessel and make a vasoligation	Performing hemostsasis on model for the learning of sutures
12. Applying a hemostatic clamp in the wound and ligating the bleeding vessel	Performing a hemostatic clamp in the wound and ligating the bleeding vessel

LIST OF EQUIPMENT USED

1. Model for the learning of sutures.
2. Model for the learning of tying surgical knots.

PROTOCOL OF THE CURRICULUM APPROVAL
BY OTHER DEPARTMENTS

Title of the discipline requiring approval	Department	Amendments to the curriculum in the academic discipline	Decision of the department, which designed the curriculum (date, protocol #)
Maxillofacial Surgery and Surgical Dentistry	Human morphology	Agreed	10.05.24 protocol #10
Propaedeutic Dentistry and Materials Science	Human morphology	Agreed	10.05.24 protocol #10

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Curriculum content, composition and the accompanying documents comply with the established requirements.

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24. 06. 2024

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24. 06. 2024