

**DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES  
AT VILNIUS UNIVERSITY**

<b>Scientific Area/eas, Field/ds of Science</b>	Medical and Health Science (M 000): Medicine (M 001)			
<b>Faculty, Institute, Department/Clinic</b>	Faculty of Medicine Institute of Clinical Medicine Clinic of Rheumatology, Orthopaedics Traumatology and Reconstructive Surgery			
<b>Course unit title</b> (ECTS credits, hours)	<b>Head and Neck Reconstructive Surgery</b> 9 credits (240 hours)			
<b>Study method</b>	<b>Lectures</b>	<b>Seminars</b>	<b>Consultations</b>	<b>Self-study</b>
Number of ECTS credits	-	-	2	7
<b>Method of the assessment</b> (in 10 point system)	Exam. Oral examination. 3 questions.			
<b>PURPOSE OF THE COURSE UNIT</b>				
To provide deeper knowledge of principles of the reconstructive, functional, and aesthetic head and neck surgery; methods of surgical treatment of malformations, injuries, tissues, and organs damaged by tumor processes.				
<b>THE MAIN TOPICS OF THE COURSE UNIT</b>				
<p>History and development. Topographic, functional, and aesthetic anatomy. Blood flow and innervation. Anatomy of hearing, vision, taste, and smell organs. Peculiarities of dental development and occlusion. Mimicry. Sexual and racial characteristics. External changes in proportions and tissue structures. Diseases of the skin and its addicts. Types of anesthesia.</p> <p>Birth defects. Embryogenesis, histogenesis, and organogenesis. Genetic features; diagnostics. Classifications of malformations: genetic, embryonic, anatomical. Normal ossification and development of the craniofacial skeleton. Craniostenosis and synostosis. Anomalies in the shape of the face and skull. Uncommon syndromes, malformations of other systems and organs. Upper lip, palate, and upper jaw growths, their prevalence. Tactics and strategies of complex treatment; examination and planning of staged treatment together with dentists, maxillofacial surgeons, and speech therapists. Indications and selection of patients for surgical treatment. Secondary nasal deformities. Methods of surgical treatment. Upper lip and palate plastic. Corrections of chin malformations. Congenital ptosis of the upper eyelid. Congenital cysts and fistulas of the head and neck, their differential diagnosis. Congenital: nasal deformities: septum, nostril, back, tip. Types of nasal deformities. Reconstruction of nasal defects. Earcup anomalies: anotia, microtia, macrotia, cup dysplasia, open ears, nipple deformities. Reconstruction of congenital partial and complete ear defects with auto and allografts, implants. Prostheses.</p> <p>Head and neck injuries; mechanisms. Examination of a traumatic patient; assessment of trauma severity. Tissue defects: skin and subcutaneous tissue, muscles, bones and cartilage, teeth, nerves, glands, mucous membranes, eyeball, hairy head, multiple. Peculiarities of reconstruction. Scarring; its phases; scar vectors. The rare ratio of functional and anatomical wrinkles (RSTL - relaxed skin tension lines). Principles of treatment of facial fractures and dislocations. Methods of osteosynthesis. Craniotomies. Le Fort I, II, III fractures; principles of treatment. Full and partial thickness transplantation. Importance of donor selection. Mucosal transplants. Complex (composite) transplants for nose and eyelid reconstruction. Flaps - geometric and anatomical principles. Z-plastic, diamond Limberg-</p>				

Defourmental flaps. Butterflies' other inverted and displaced flaps, "island flaps". Flap circulation. Offset cheek flap (Esser). Various flaps of the forehead, and scalp (Converse) flaps. Nasolabial, Abbe-Estlander, and other flaps. Oral and tongue flaps. Deltopectoral, trapezoidal neck flaps. Myocutaneous: pectoral, large back muscle, m.sternocleidomastoideus flaps. Indications for their application. Osteocutaneous cranial flaps. Classification of flaps. Functional, sensory flaps. Vascularized bone, large sebaceous, small intestinal autotransplantation. Facial nerve palsy. Types of operations. Reconstruction of the nose, lips, eyelids, tear apparatus, and ears due to partial or complete defects. Possibilities of plastic reconstructive surgery for reconstruction of defects due to malignant tumors. Non-malignant and malignant tumors of the skin; their differential diagnosis. Tumors of soft tissues and bones. Principles of multidisciplinary treatment. Angiodysplasia. Reconstruction of jaws, mucous membranes, pharynx, esophagus, and trachea with free vascularized flaps. Infections. Reconstruction of defects after infectious diseases. Head and neck burns. Peculiarities and principles of early surgical treatment. Use of artificial skin to temporarily cover large skin defects. Fabric expanders; implants; prostheses. Areas of application. Allotransplantation of head and neck organs and fragments.

### **RECOMMENDED LITERATURE SOURCES**

1. Kuokkanen H, Holstrom H, Abyholm FE, Drzewiecki KT. Skandinavijos plastinė ir rekonstrukcinė chirurgija. Vilniaus universiteto leidykla 2016.
3. Plastic Surgery. Mathes SJ, Hentz VR. 2nd Editon. 8 volumes with the website. Saunders 2005.
4. Grabb and Smith's Plastic Surgery. Kevin C Chung MD, MS 8th edition. Wolters Kluwer. 2019.
5. Major Flap Utilization in Head and Neck Reconstruction: A Defect-Oriented Approach. Urken ML. Lippincott Williams & Wilkins 2003.
6. Flaps and Reconstructive Surgery. Wei FC, Mardini S. Saunders 2009.
7. Grabb's Encyclopedia of Flaps. Strauch B, Vasconez LO, Hall-Findlay EJ, Lee BT. Wolters Kluwer. 2015.
8. Surgical Approaches to the Facial Skeleton. Ellis E, Zide MF. Walters Kluwer. 2018.
9. Nasal Reconstruction: Art and Practice. Menick FJ. Saunders 2008.
10. Facial Plastic Surgery: The Essential Guide. Park SS. Thieme 2005.
11. Local Flaps in Facial Reconstruction. Shan Baker. Elsevier. 2021.
12. Cosmetic Facial Surgery. Joseph Niamtu. 2nd Edition 2016.

### **CONSULTING LECTURERS**

1. Coordinating lecturer: Giedrė Stundžaitė-Baršauskienė (Assist. Prof. Dr.).
2. Nerijus Jakutis (Assist. Prof. Dr.).
3. Vytautas Tutkus (Assoc. Prof. Dr.).

### **APPROVED:**

By Council of Doctoral School of Medicine and Health Sciences at Vilnius University:  
29<sup>th</sup> of September 2022

Chairperson of the Board: Prof. Janina Tutkuvienė