KHARKIV NATIONAL MEDICAL UNIVERSITY

EDUCATIONAL DISCIPLINE SYLLABUS

SURGICAL DENTISTRY

Specialty: **221 «Dentistry»**
Educational and Professional Program: **Dentistry**
Component Code in the Educational Program: **OK 29**
Higher education level: **Second (Master's)**
Form of the Educational Component: **full-time (daytime)**
Year of study: **5**
Semester(s): **IX (autumn), X (spring)**
Type of Educational Component: **compulsory**
Academic year: **2028–2029**

Volume: **8 ECTS credits (240 hours)**
Training sessions: **lectures, practical classes, consultations**
Final control: **Differentiated credit**
Unified State Qualification Exam in the Specialty I1 "Dentistry"
Prerequisites: **anatomy and morphology, pathological anatomy, radiological diagnostics, surgical dentistry and maxillofacial surgery**

Department / Unit: **the Department of Surgical Dentistry and Maxillofacial Surgery,**
Peremohy Ave., 51, 6 Floor
Head of the Educational Component:
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Educational Component Page in the Distance Learning System KhNMU (Moodle):
https://distance.knmu.edu.ua/course/index.php?categoryid=309

DESCRIPTION OF THE EDUCATIONAL COMPONENT

Operative Dentistry studies methods of patient examination, diagnosis of surgical dental diseases, their treatment, and prevention in the surgical dentistry clinic.

PURPOSE OF THE COURSE: Students will learn to conduct examinations, diagnose, and treat patients with surgical pathology of the maxillofacial region (MFR) tissues.

LEARNING OUTCOMES:

- ability to identify and determine the leading clinical symptoms and syndromes, and to establish a probable nosological or syndromic clinical diagnosis of surgical dental diseases;
- ability to demonstrate the basic methods of examining a patient in the clinic of surgical dentistry;
- planning the examination of a patient with diseases of the maxillofacial region;
- ability to determine the final clinical diagnosis through analysis of the obtained subjective and objective data from clinical and additional examinations;
- aability to perform differential diagnosis of diseases of the organs of the maxillofacial region;
- acquisition and improvement of practical skills in the treatment of patients with surgical pathology of the tissues of the maxillofacial region according to existing algorithms and standard treatment protocols;
- development of professional abilities and skills for making independent decisions in selecting treatment methods based on a preliminary and/or final clinical diagnosis in the surgical dentistry clinic;
- ability to identify different clinical variants and complications of the most common diseases encountered in surgical dentistry practice;
- ability to complete the main medical documentation related to dental appointments;

- ability to carry out prevention of dental diseases among the population in order to prevent the spread of dental diseases;
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CONTENT OF THE EDUCATIONAL COMPONENT

List of Lecture Topics (20 hours):

1. Subject and task of emergency maxillofacial surgery. General military medical doctrine. Wound ballistics, clinical course of a modern gunshot wound, general diagnostic signs of facial gunshot wounds. Damage to soft tissues of the face, primary surgical treatment of wounds, types of sutures. Features of the course and treatment of wounds of soft tissues of the face, assistance at the stages of evacuation in wartime and in extreme conditions. Thermal and radiation damage to the face.
2. Damage to the bones of the facial skull in peacetime and wartime: clinic, diagnosis, treatment, modern principles of bone wound treatment. Non-fire and combat injuries of the lower jaw. Fracture classification, clinic, diagnosis, temporary (transport) and permanent (medical) immobilization of jaw fragments. Treatment of the wounded and injured at the stages of medical evacuation.
3. Early and late complications of traumatic injuries and combat wounds of facial tissues, oral cavity organs, jaws and bones of the facial skeleton: classification, clinic, diagnosis, prevention, treatment.
4. Cysts of soft tissues of the face and neck: dermoid, epidermoid, median, lateral cysts (fistula) of the neck, parotid cysts and fistulas. Jaw cysts of various etiologies: radicular, follicular, paradental and others. Classification, pathogenesis, pathanatomy, clinic, differential diagnosis, methods of surgical treatment.
5. Tumor-like diseases of maxillofacial region: classifications, clinical picture, differential diagnosis, principles and methods of treatment.
   Odontogenic tumors: ameloblastoma, odontoma. Benign neodontogenic neoplasms of the jaws: clinic, differential diagnosis, principles and methods of treatment. Odontogenic tumor-like formations. Epulids: classification, pathanatomy, clinic, diagnosis, treatment methods.

List of Practical Session Topics (140 hours):

1. Precancer diseases of orofacial region and oral cavity. Classification, clinical signs, diagnostics, treatment. Epidemiology, etiological factors and classification of orofacial region tumours. Organization of oncologic help for patients with tumours orofacial region.
2. Malignant tumours of jaws. Clinical signs, diagnostics, treatment.
   Benign and malignant tumours of salivary glands. Classification, clinical signs, diagnostics, treatment.
   Supervision of patients with writing of academic case history (on MOODL)
3. Surgical treatments of periodontal deseases. Physiotherapy of surgical dental diseases and injuries, with reconstructive surgery, face and mouth.
4. Diseases of the nerves of the maxillofacial area: neuritis and neuralgia of the trigeminal nerve, facial nerve. Etiology, pathogenesis, clinic, diagnosis, treatment. Ganglionitis, vegetative pain and paresthetic syndromes of the face. Clinic, diagnosis, treatment.
5. Inflammatory and dystrophic diseases of the temporomandibular joint (TMJ): arthritis, arthrosis. TMJ pain dysfunction syndrome. Classification, clinic, diagnosis, treatment. Ankylosis of the temporomandibular joint, contractures of the lower jaw. Classification, clinic, diagnosis, treatment, prevention.

6. Types of anomalies and deformation of jaws. Classification, clinical signs, diagnostics, treatment. Aims and tasks of reconstruction surgery of maxillofacial region. Planning of plastic operations. The plastic operations by local tissues. Plastic by flaps on the leg. Reconstructive surgery of the face using Filatov flap.
7. Urano-, Chylo-, Otoplasty. Rhinoplasty, osteo- and hondroplasty. Surgical treatment of deformities of occlusion, Free transplantation of tissues. Dermatoplasty. Osteoplasty.
8. Organiztioan and management of anesthesiology servises in oral and maxillofacial dentistry. Types, methods and features general anesthesia during surgery. New methods of narcosis. Neuroleptoanalgesia Premedication. Main groups of drugs for premedication. Local anesthesia. Chemical, physical and farmclinical properties of local anesthetic preparations, dosages, concentration. Techniques of anestesia on the upper i lower jaws. Anestesia by Vishnevsky. Method anestesia on Bershe - Dubov. Local and general complications during and after the local anesthesia, their diagnostics, prevention and treatment.
9. Methods and techniques of operations: resection, amputation hemisektion and replantation transplantation of teeth, surgical treatment of periodontal diseases. Possible complications, treatment, prevention.
10. Distinctive features of the inflammatory processes of the maxillofacial area: etiology and pathogenesis Classification of inflammatory diseases. Theory of the pathogenesis of acute odontogenic osteomyelitis of jaws. Features current of acute inflammatory processes: acute osteomyelitis, abscesses and phlegmon, lymfadenitis and adenophlehmon, sinusitis. Difdyagnosis of acute inflammatory processes. Modem principles of treatment of inflammatory processes. Indications for surgical intervention. The importance of choose an effective method of anesthesia for surgical treatment.
11. Specific inflammatory processes of the maxillofacial area (actinomicosis, tuberculosis, syphilis): etiology, pathogenesis, classification, symptoms and signs, diagnostics, medical treatment, complications, and preventive measures. Actinomycos maxillofacial area. Classification, clinic, dyagnostics, treatment, complication, preventive.
12. Seminar 1. Modern principles of diagnosis and treatment of odontogenic and nonodontogenic inflammatory processes of maxillofacial area.
13. Inflammatory and dystrophy diseases of the salivary glands: etiology, pathogenesis, classification, symptoms and signs, diagnostics, medical treatment, and preventive measures. Diseases associated with the stones in the salivary glands: etiology: pathogenesis, classification, symptoms and signs, diagnostics, medical treatment, complications, and preventive.
14. Classification, etiology, pathogenesis, conformities to law of growth and development of benign tumors of maxillofacial principles them differential diagnostics and treatment. Odontogenic and nonodontogenic tumors, tumor-lice new form and cysts of the jaws (ameloblastoma, odontoma, cementoma, osteoclastoma, osteoma, chondroma, fibroma, epulis symptoms and signs, features of differential diagnostics, medical treatment, and complication.
15. Benign tumors of soft tissues and organs of oral cavity: etiology, pathogenesis, classification, symptoms and signs, diagnostics, treatment, and preventive measures (papilloma, fibroma, lipoma, neurofibroma, neurofibromatohosis). Malign of soft tissues of maxillofacial area and organs of oral cavity etiology, pathogenesis, classification, symptoms and signs, diagnostics, treatment, and preventive measures (sarcoma, melanoma and other).
16. Classification, clinical picture, diagnosis and treatment of inflammatory and degenerative diseases of the temporomandibulal joint. Diagnosis and reduction of dislocation of the mandible. Fundamentals of diagnosis and treatment of ankylosis and contractures of the mandible.
17. Seminar 2. Traumatic injuries of the maxillofacial area.

18. Facial nerve disease. Pain and paresthesia syndromes in maxillofacial area: neuritis, trigeminal neuralgia, and facial paral; (surgical methods of treatment) Differential diagnosis and treatment.
19. Congenital and acquired anomalies and deformities of the jaws. Methods of treatment. Plasty with local tissues. Z-plasty, local pedicle flap surgery. Main types of tissue defects to use methods of local plasty.
20. Osteo- and chondroplasty in congenital and acquired defects. Plastic flap on the leg. Plastic by Filatov stem. Characteristics of cheilo-, mailo-, uranium-, otoplasty methods. Rhinoplasty.
21. Means of surgical treatment of jaw deformities: prognathia, micrognathia, open occlusion. Principles of complex therapy of patients. X-ray methods of research of surgical diseases of maxillofacial area. The main methods of intraoral and extraoral styling. Physiotherapy for diseases, injuries of the maxillofacial area and after restorative operations.
22. Preparation for KROK-2.

List of Student Independent Work Topics (80 hours):

1. Surgical Methods for Treating Temporomandibular Joint (TMJ) Diseases, TMJ Plastics.
2. Temporomandibular Joint Pain Dysfunction Syndrome.
3. Surgical Methods for Treating Mandibular Contracture.
4. Soft Tissue Plastics in the Maxillofacial Region (MFR) Using Local Tissues.
5. Soft Tissue Plastics in the Maxillofacial Region (MFR) Using Pedicled Flaps.
6. Soft Tissue Plastics in the Maxillofacial Region (MFR) Using Free Skin Flaps.
7. Microsurgery of Maxillofacial Tissues.
8. Tissue Regeneration. Biological Aspects of Osteogenesis.
9. Bone Tissue Plastics in the Maxillofacial Region (MFR), Autologous Bone Grafting.
10. Biological Foundations of Artificial Tooth Implantation.
11. Osseointegration. Osteogenic, Osteoinductive, Osteoconductive, and Bone Substitution Materials.
12. Periodontal Surgery. Guided Bone Regeneration. Membrane Technique.
13. Tissue Regeneration. Biological Aspects of Osteogenesis.
14. Bone Tissue Plastics in the Maxillofacial Region (MFR), Autologous Bone Grafting.
15. Osseointegration. Osteogenic, Osteoinductive, Osteoconductive, and Bone Substitution Materials.

Independent Study Work (ISR) is aimed at deepening and consolidating the theoretical knowledge acquired during classroom learning and contributes to the development of professional competencies. The results of ISR are subject to control and are included in the final assessment of knowledge.

Consultations: Online, by prior registration on the course page in the Distance Learning System.
Teaching Methods: Lecture, performing exercises and practical tasks, solving situational problems and case studies, and the standardized patient method.

EVALUATION

Current Learning Activities (CLA). Student performance is assessed in accordance with the Instructions for Evaluating the Academic Activities of Higher Education Students at KhNMU (https://knmu.edu.ua/documents/normatyvni-dokumenty-navchalnogo-proczesu/). The grade for a practical or final session ranges from 2 to 5 points. Submitting assignments late without a valid reason results in a grade reduction proportional to the delay time relative to the assignment deadline. Assignments are checked within 24 hours. Grades are recorded in the electronic gradebook.

Unsatisfactory grades must be remedied in accordance with the Regulations on the Procedure for Students to Make Up Unsatisfactory Work KhNMU Classes / Educational Sessions (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_vidprac_zaniat.pdf).
At the end of the semester, the average grade for the semester is converted into a multi-point grade (70–120 points) according to Table 1 of the Evaluation Instructions (see above). The arithmetic mean of the Current Learning activity (CLA) for both semesters constitutes the overall academic activity (OAA).
Individual tasks (IT) are graded up to 10 points.
Final control: To be eligible for the differentiated pass/fail exam (diffcredit), the student must score at least 70 points in the overall academic activity (OAA). The exam grade for the diffzalik ranges from 50 to 80 points.
Grade in subject (GS): GS = OAA + IT + diffcredit.

The student assessment is conducted in the form of a practice-oriented exam, as defined in the educational and professional program and curriculum for the relevant level of higher education and specialty.

Assessment Results are determined using two grading scales: a 200-point scale and a national 4-point scale (“excellent,” “good,” “satisfactory,” “unsatisfactory”).
Appealing the results of the final control Is conducted in accordance with the procedure established by the KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_apel_kontrol.pdf).

POLICIES OF THE EDUCATIONAL COMPONENT

Recommendations for working on the course: Actively participate in all forms of class activities, dedicate 1–2 hours daily to independent work and preparation for classes, ask questions during sessions, attend consultations, submit assignments on time, and complete all forms of assessment.
Attending classes. Attendance at lectures and practical classes is mandatory. The required attire for in-person sessions is a white medical coat. If you are more than 5 minutes late, you may be denied entry to the class. Missed sessions must be made up in accordance with the Regulations on the Procedure for Students to Make Up Missed Educational Sessions at the educational institution KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_vidprac_zaniat.pdf).
Academic Integrity. The KhNMU maintains a zero-tolerance policy toward any forms of academic dishonesty. Any violations of the principles of academic integrity entail responsibility in accordance with the procedure established by the KhNMU (https://knmu.edu.ua/wp-content/uploads/2021/05/polog_ad-1.pdf).
Use of Electronic Devices and Artificial Intelligence Tools Allowed only with the Teacher’s permission.
Policy on Students with Special Educational Needs. Students with special educational needs should contact the instructor to develop an individual educational plan.
Teacher Response Time: 24 hours.

Technical Requirements for the Course:

- Access to a computer, laptop, tablet, or smartphone
- Corporate Google account with a personal photo
- Skills in using Google Workspace (Google Meet, Docs, Sheets, Slides, Forms) та Moodle

Technical Support: **LMS (Learning Management System)** (ev.shevtsov@knmu.edu.ua), Google (tehotdelknmu@gmail.com), Moodle (al.korol@knmu.edu.ua)

RECOMMENDED RESOURCES

1. Oral and Maxillofacial Surgery. Pt. 1 / ed. V. Malanchuk. - 2nd ed., updated. - Vinnytsya: Nova Knyha Publ. - 440 p.- 2018.

2. Oral and Maxillofacial Surgery. Pt. 2 / ed. V. Malanchuk. - 2nd ed., updated. - Vinnytsya: Nova Knyha Publ. - 296 p. – 2018.
3. Oral and Maxillofacial Surgery. Edited by Lars Andersson DDS, PhD, Karl-Erik Kahnberg DDS, M. Anthony (Tony) Pogrel DDS. / © 2010 Blackwell Publishing Ltd
4. Oral and maxillofacial surgery diseases. Edited by Crispian Scully, Stephen R Flint, Jose V Bagan, Stephen R Porter and Khursheed F Moos. / © 2010 Informa UK Ltd, except as otherwise indicated.
5. PETERSON'S PRINCIPLES OF ORAL AND MAXILLOFACIAL SURGERY Second Edition. Michael Miloro - Editor G. E. Ghali • Peter E. Larsen • Peter D. Waite - Associate Editors. / 2004 BC Decker Inc Hamilton • London.

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of Surgical Dentistry and
Maxillofacial Surgery

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