

AKADEMIC STANDART FOR THE DISCIPLINE SPECIAL SURGERY, INCLUDING LOCAL ANESTHESIA AND ANALGESICS IN DENTAL MEDICINE

1. Purpose of the education

The discipline “Special surgery, including local anesthesia and analgesics in dental medicine” teaches students fundamental surgical procedures and methods of providing local anesthesia. The aim of the course is to give some fundamental knowledge and practical guidance to the students in dental medicine, who acquire theoretical knowledge and practical skills to perform patient examination, provide local anesthesia and extract teeth.

2. Educational content

Syllabus

Discipline	Exam	Academic Hours			Academic Hours in Years and Semesters																			
		Total	Lectures	Practicals	I year				II year				III year				IV year				V year			
I					II		I		II		I		II		I		II		I		II			
l	p				l	p	l	p	l	p	l	p	l	p	l	p	l	p	l	p	l	p		
Special surgery, including local anesthesia and analgesics in dental medicine																								
	VI	180	60	120									2	4	2	4								

Type of discipline: compulsory

Degree: Master’s degree

Forma of training: Lectures, seminar exercises, self-study

Course length: Two semesters

Academic Hours: 120 lecture hours, 60 exercise hours

Training methods: Multimedia presentation, discussion, monitoring tests, figures, interpretation of case reports, practical tasks solving

Forms of assessment: Ongoing monitoring, participation of seminars and colloquia, monitoring tests, semester examination

Formation of ongoing monitoring: Average assessment grade per semester

Aspects of assessment: Participation of discussions, seminars and colloquia, monitoring tests, figures drawing

Semester examination: Test, written and oral examination

State examination: Written and oral examination in special surgery, including local anesthesia and analgesics in dental medicine; oral and maxillo-facial surgery

Tutor: Habilitated Professor of Oral surgery

Department: Oral surgery

**Lectures of Special surgery, including local anesthesia and analgesics in dental medicine for
3rd year Dental medicine students, Winter Term**

№	TOPIC
1.	Historical development of oral and maxillofacial surgery. Scope and aims. Oral and maxillofacial surgery in Bulgaria.
2.	Asepsis and antisepsis in oral and maxillofacial surgery.
3.	Patient evaluation in oral and maxillofacial surgery – patient history and physical examination.
4.	Laboratory and imaging studies in oral and maxillofacial surgery.
5.	Pain – definition, etiology, classification. Pathways for superficial and deep somatic pain in the oral and maxillofacial region.
6.	Anesthesia in oral surgery. General information. Types of anesthesia. Preparation of the patient for anesthesia (premedication).
7.	Local anesthetics. Pharmacology.
8.	Vasoconstrictors. Pharmacology, indications and contraindications for use in oral surgery.
9.	Terminal local anesthesia - topical anesthesia, local infiltration anesthesia, intraligamentary anesthesia.
10.	Regional block anesthesia of the maxilla (intra- and extraoral). Anatomical considerations. Technique.
11.	Regional block anesthesia of the mandible (intra- and extraoral). Anatomical considerations. Technique.
12.	Anesthesia in children. Anesthetic considerations in oral and maxillofacial infections.
13.	Complications of local anesthesia.
14.	General anesthesia in oral and maxillofacial surgery – types of anesthetic agents. Delivery and monitoring of general anesthesia, complications and prevention.
15.	Pharmacological management of pain – non-opioid, opioid and adjuvant analgesics. Types, mechanism of action.

**Lectures of Special surgery, including local anesthesia and analgesics in dental medicine for
3rd year Dental medicine students, Summer Term**

№	TOPIC
16.	Common surgical instruments – types, design and principles of use.
17.	Dental extraction. Indications and contraindications. Preparation of the patient.
18.	Instruments for dental extraction – types, design and principles of use.
19.	Anatomical and mechanical considerations for dental extraction. Steps and techniques of tooth extraction. Extraction wound healing – characteristics of the process.
20.	Surgical (open) extraction, extraction of impacted teeth, germectomy.
21.	Dental extraction in medically compromised patients (disorders of cardiovascular and respiratory systems, blood and hematopoietic system, endocrine and renal disorders, hepatic disorders, patients on corticosteroid therapy, received radiotherapy; pregnant woman).
22.	Complications during dental extraction.
23.	Complications after dental extraction.
24.	Surgical incisions, hemostasis, curettage, surgical suturing, bone osteosynthesis – principles, types, modern osteosynthesis methods and materials.
25.	High-frequency electrosurgery, piezosurgery and lasers in oral surgery.
26.	Inflammatory processes in the oral cavity and maxillofacial area. Incidence, etiology and pathogenesis. Pathways of infection dissemination. General characteristics of the inflammation in the oral cavity and maxillofacial area. Patient assessment.
27.	Tooth eruption disorders. Etiology and pathogenesis. Methods of diagnosis and treatment.
28.	Periodontitis. Etiology and pathogenesis. Classification. Acute periodontitis. Clinical signs. Methods of diagnosis and treatment.
29.	Chronic periodontitis. Clinical signs. Methods of diagnosis and treatment.
30.	Surgical treatment of chronic periodontitis - apical osteotomy, hemisection, replantation, hemisection, root amputation, extraction.

**Practicals of Special surgery, including local anesthesia and analgesics in dental medicine for
3rd year Dental medicine students, Winter Term**

№	TOPIC
1.	Introduction in the oral surgery. The history of the oral surgery in Bulgaria. Aims and purposes.
2.	Asepsis and antisepsis. Preparation of the patient and surgical team for operation.
3.	Patient examination in the oral surgery. History and status.
4.	Paraclinical tests in the oral surgery. Laboratory and instrumental tests. X-rays..
5.	Pain – definition, types. Pain tracts of the superficial and deep sensation. The pain tracts from the oral cavity and maxillofacial region
6.	Anesthesia in the oral cavity and maxillofacial region. General and local anesthesia. Indications and contraindications. Preparation of the patient.
7.	Anesthetic agents for local anesthesia. Vasoconstrictors. Pharmacologic features. Doses
8.	Anatomic, topographic and physiologic features in the maxillofacial region. Terminal anesthesia – types, techniques.
9.	Anatomic, topographic and physiologic features in the maxillofacial region. Anesthesia of the upper jaw. Techniques.
10.	Anatomic, topographic and physiologic features in the maxillofacial region. Anesthesia of lower jaw. Techniques.
11.	Anatomic, topographic and physiologic features in the maxillofacial region. Anesthesia in children. Anesthesia by inflammatory processes.
12.	SEMINAR: Local anesthesia – techniques and anesthetic agents
13.	Local complication by local anesthesia.
14.	General complication by local anesthesia. Injection techniques and infusion treatment.
15.	Demonstration of local anesthesia.

**Practicals of Special surgery, including local anesthesia and analgesics in dental medicine for
3rd year Dental medicine students, Summer Term**

№	TOPIC
16.	Common surgical instruments – types, design and principles of use. Instruments for dental extraction – types, design and principles of use.
17.	Dental extraction. Indications and contraindications. Preparation of the patient. Anatomical and mechanical considerations for dental extraction. Steps and techniques of tooth extraction. Extraction wound healing – characteristics of the process.
18.	Extraction of maxillary teeth. Extraction of mandibular teeth. Extraction of dental roots.
19.	Tooth extraction in child. Tooth extraction during pregnancy.
20.	Atypical (surgical/ open) extraction, extraction of impacted and semi impacted teeth.
21.	Dental extraction in medically compromised patients.
22.	Complications during dental extraction. Clinical signs, diagnosis, management.
23.	Complications after dental extraction. Clinical signs, diagnosis, management.
24.	Dental extraction – demonstration.
25.	Colloquium: Dental extraction. Indications and contraindications. Preparation of the patient. Extraction of different teeth – details. Complications related with local anesthesia and dental extraction – causes, clinical signs, management.
26.	Basic surgical manipulations - hemostasis, suturing, drainage, curettage, incisions.
27.	High-frequency electrosurgery, piezosurgery and lasers in oral surgery.
28.	Tooth eruption disorders. Clinical signs, diagnosis, management.
29.	Acute periodontitis. Etiology and pathogenesis. Classification. Clinical signs. Methods of diagnosis and treatment.
30.	Chronic periodontitis. Etiology and pathogenesis. Classification. Clinical signs. Methods of diagnosis and treatment.

3. Basic tasks of the education

The goal of the training in the discipline “Special surgery, including local anesthesia and analgesics in dental medicine ” is for the students to acquire knowledge and abilities to : apply contemporary methods for asepsis and antisepsis, use modern anesthetic solutions in dental practice, master the methods of anesthetizing the tissues within the oral cavity during tooth extraction, be capable of diagnosing and managing the occurring complications associated with the administration of local anesthetic solutions and tooth extraction. The acquired knowledge presents a fundament for the consecutive training in the discipline” Oral and maxillofacial surgery”. After finishing the training students should possess the knowledge and skills to as follows: obtain patient’s history, determine their status, provide asepsis and antisepsis, use modern anesthetic solutions, use analgesics, manage occurring complications during local anesthesia and teeth extraction.

4. Academic resources

The department should have the required number of lecturers, according to the accepted norms for the educational workload of a single lecturer in the Medical university, Faculty of dental medicine – Plovdiv. The lecturer should possess an excellent theoretical and practical qualification and “Oral surgery” specialty, should be actively involved in the execution of the scientific work, according to department’s plan, being guided by the contemporary achievements in the area of the discipline, that is being taught.

5. Physical resources

For the execution of the training the department should have the necessary number of clinical rooms, equipped with dental units, special instruments and computers. The operation rooms should be equipped with modern dental units, operation table, as with equipment for piezosurgery, laser therapy and implantology.

6. Lecture education

The textbook, written by the department, on which the lecturing and practical training of the students are based and being had, is available on the website of the faculty.

Sources:

- ✚ Andersson L, Kahnberg KE, Pogrel A. Oral and Maxillofacial Surgery (2010) Blackwell Publishing Ltd. *ISBN 978-1-4051-7119-9*
- ✚ Hupp JR, Ellis E III, Tucker MR. Contemporary oral and maxillofacial surgery, fifth edition (2008) Mosby, Inc affiliate of Elsevier Inc. *ISBN 9780323049030*
- ✚ Malamed SF. Handbook of local anesthesia, sixth edition (2013) Mosby, Inc affiliate of Elsevier Inc. *ISBN: 978-0-323-07413-1*
- ✚ Fragiskos FD. Oral surgery (2007) Springer-Verlag Berlin Heidelberg. *ISBN-13: 978-3-540-25184-2.*

Tutors:

1. **Petia Pechalova**, DDS, MD, PhD, associate professor, Department of oral surgery, oral and maxillo-facial surgeon
2. **Cvetan Cvetanov**, DDS, PhD, asistance professor, Department of oral surgery, oral surgeon
3. **Atanaska Dinkova**, DDS, asistance professor, Department of oral surgery, oral surgeon
4. **Yordan Burmov**, DDS, asistance professor, Department of oral surgery
5. **Bistra Blagova**, DDS, asistance professor, Department of oral surgery

7. Exercises

The exercises take place in the seminar rooms in groups of 5-7 students. Tests are presented for the exercises. With tests we check:

- Student's preparation
- Knowledge and skills acquired during the particular exercise.

Under the guidance and the control of the assistant professor, students obtain patient's history, and determine status, form a preliminary diagnose, acquire on the phantom model the technics of providing anesthesia, exodontia and the basic surgical principles(suturing, drainage, etc).

Examination syllabus

Oral surgery for students 3rd year

1. Historical development of the oral and maxillofacial surgery. Scope and aims. Oral surgery in Bulgaria.
2. Asepsis and antisepsis in oral surgery. Preparation of the patient and surgical team.
3. Patient evaluation in oral surgery. Patient history and physical examination.
4. Paraclinical tests in oral surgery. Laboratory, microbiology, histology, cytology and imaging studies in oral surgery.
5. Pain – definition, etiology, classification. Pathways for superficial and deep somatic pain.
6. Basic surgical principles: wounds, haemostasis, wounds healing, impairment of the healing process, tissues and teeth replacement.
7. Anesthesia in oral surgery. General information. Types of anesthesia. Preparation of the patient for anesthesia (premedication).
8. Local anesthetics. Pharmacology.
9. Vasoconstrictors. Pharmacology, indications and contraindications for their use in oral surgery.
10. Anatomical and physiological characteristics of the maxillofacial area. Terminal local anesthesia - *topical anesthesia*, infiltrative anesthesia, intraligamentary anesthesia. Techniques.
11. Regional block anesthesia of the maxilla (intra- and extraoral). Anatomic and topographic features. Techniques.
12. Regional block anesthesia of the mandible (intra- and extraoral). Anatomic and topographic features. Techniques.
13. Anesthesia in children - characteristics. Features of regional anesthesia in oral and maxillofacial areas in inflammatory processes.
14. Local complications of local anesthesia. Clinical signs, diagnosis, management.
15. General complications of local anesthesia. Clinical signs, diagnosis, management.
16. General anesthesia in oral surgery. Types of anesthetic agents. Management and guidance of anesthesia. Complications, prevention.
17. Pharmacological management of pain – non-opioid, opioid and adjuvant analgesics. Types, mechanism of action.
18. Common surgical instruments – types, design and principles of use.
19. High-frequency electrosurgery, *piezosurgery* and lasers in oral surgery.
20. Surgical sutures and suturing – instruments and materials. Types of sutures and knots. Techniques.
21. Tooth extraction (exodontia). Indications and contraindications. Preparation of the patient.
22. Instruments for tooth extraction – types, design and principles of use.

23. Anatomical and mechanical considerations for tooth extraction - steps and methods. Dentist's and patient's care for the extraction wound. Extraction wound healing – characteristics of the process.
24. Surgical (open, atypical) extraction. Indications, techniques.
25. Removal of partially erupted and impacted teeth. Indications, contraindications, techniques, complications. Gummectomy.
26. Tooth extractions in medically compromised patients (disorders of cardiovascular and respiratory systems). Management.
27. Tooth extractions in medically compromised patients (disorders of blood and hematopoietic system). Management.
28. Tooth extractions in medically compromised patients (endocrine and renal disorders). Management.
29. Tooth extractions in medically compromised patients (hepatic disorders, patients on corticosteroid therapy, received radiotherapy; pregnant woman). Management.
30. Complications during tooth extraction. Local complications. Clinical signs, diagnosis, management.
31. Complications during tooth extraction. General complications. Clinical signs, diagnosis, management.
32. Complications after tooth extraction. Clinical signs, diagnosis, management.
33. Inflammatory processes in the oral cavity and maxillofacial area. Incidence, etiology and pathogenesis. Pathways of infection dissemination. General characteristics of the inflammation in the oral cavity and maxillofacial area. Patient assessment.
34. Tooth eruption disorders. Classification. *Retained tooth eruption*. Etiology and pathogenesis. Clinical signs. Methods of diagnosis and treatment.
35. Tooth eruption disorders. Classification. *Complicated tooth eruption*. Etiology and pathogenesis. Clinical signs. Methods of diagnosis and treatment.
36. Periodontitis. Etiology and pathogenesis. Classification. Acute apical periodontitis. Clinical signs. Methods of diagnosis and treatment.
37. Chronic apical periodontitis. Clinical signs. Methods of diagnosis and treatment. (hemisection, replantation, root amputation).
38. Apical osteotomy. Indications, contraindications. Preoperative preparation of the tooth. Techniques, complications, prevention.

Sources:

- ✚ Pechalova P, Introduction to oral surgery, a textbook for the third year students of dental medicine, Plovdiv 2016
- ✚ Andersson L, Kahnberg KE, Pogrel A. Oral and Maxillofacial Surgery (2010) Blackwell Publishing Ltd. ISBN 978-1-4051-7119-9
- ✚ Hupp JR, Ellis E III, Tucker MR. Contemporary oral and maxillofacial surgery, fifth edition (2008) Mosby, Inc affiliate of Elsevier Inc. ISBN 9780323049030
- ✚ Malamed SF. Handbook of local anesthesia, sixth edition (2013) Mosby, Inc affiliate of Elsevier Inc. ISBN: 978-0-323-07413-1
- ✚ Fragiskos FD. Oral surgery (2007) Springer-Verlag Berlin Heidelberg. ISBN-13: 978-3-540-25184-2.

Oral and maxillofacial surgery

1. Goal of the education

The education in the discipline aims to give fundamental knowledge and to develop practical skills in the ones who graduate with the specialty dental medicine. Through the education course in oral and maxillofacial surgery students acquire the theoretical knowledge and practical skills necessary for working in a non-hospital dental practice – examination of a patient, providing anesthesia and extraction of teeth, diagnostics of oral-surgical and maxillofacial diseases. It aims also to theoretically and practically prepare the students in dental medicine for individual work in diagnostics and treatment of the diseases, concerning the oral and maxillofacial surgery.

2. Educational content

Annotation:

Oral surgery is a part of dental medicine concerned with correcting problems or damage to the mouth, teeth and jaws. Oral surgery deals with the diagnosis of, and the surgery required by, diseases, injuries, and defects of the human jaws and associated structures. Both dentists and physicians refer a wide variety of special dental problems to the oral surgeon. Oral surgery is dental specialty.

Maxillofacial surgery is surgery to treat many diseases, injuries and defects in the head, neck, face, jaws and the hard and soft tissues of the oral and maxillofacial region. It is an internationally recognized surgical specialty. In most countries around the world, including the United States, Canada, and Australia it is a recognized specialty of dentistry; in others (UK, Italy), including Bulgaria, it is recognized as a medical specialty.

Oral surgery is performed usually in ambulatory offices – individual practices or group practices. Maxillo-facial surgery is hospital based specialty.

The most common procedure in oral surgery is tooth extraction (so called exodontia). The complications after tooth extraction are in domain of oral surgeon too. Oral and maxillo-facial surgeon also treats:

- ✓ inflammations
 - from dental origin in oral cavity,
 - inflammation from different origin in maxillo-facial area,
 - inflammation of the neck.
- ✓ Osteomyelitis of the jaws
- ✓ Lymphadenitis
- ✓ Sinuitis from dental origin
- ✓ Cysts of the jaws
- ✓ Cysts of soft tissues
- ✓ Diseases of salivary glands
- ✓ Temporo-mandibular joint diseases
- ✓ Diseases of gums and periodontium
- ✓ Trauma of teeth and soft tissues in oral cavity and maxillo-facial area
- ✓ Fractures of jaws, zygoma and nose
- ✓ Defects of tissues
- ✓ Benign tumors
- ✓ Cancers

Syllabus

Discipline	Exam	Academic Hours			Academic Hours in Years and Semesters																											
		Total	Lectures	Practicals	I year				II year				III year				IV year				V year											
I					II		I		II		I		II		I		II		I		II											
l	p				l	p	l	p	l	p	l	p	l	p	l	p	l	p	l	p	l	p										
Special surgery, including local anesthesia and analgesics in dental medicine	X	330	60	270																												
																					1	4	1	4	1	4	1	4	1	6		

Type of discipline: compulsory

Degree: Master's degree

Forma of training: Lectures, seminar exercises, self-study

Course length: Four semesters

Academic Hours: 60 lecture hours, 270 exercise hours

Training methods: Multimedia presentation, discussion, monitoring tests, figures, interpretation of case reports, practical tasks solving

Forms of assessment: Ongoing monitoring, participation of seminars and colloquia, monitoring tests, semester examination

Formation of ongoing monitoring: Average assessment grade per semester

Aspects of assessment: Participation of discussions, seminars and colloquia, monitoring tests, figures drawing

Semester examination: Test, written and oral examination

State examination: Written and oral examination in special surgery, including local anesthesia and analgesics in dental medicine; oral and maxillo-facial surgery

Tutor: Habilitated Professor of Oral surgery

Department: Oral surgery, Maxillofacial surgery

**Lectures of Oral and maxillofacial surgery
for 4th year Dental medicine students, Winter Term**

№	TOPIC
1.	Inflammatory processes (abscesses and phlegmons) of the face – anatomy, clinical signs, differential diagnosis. Treatment.
2.	Maxillary abscesses and phlegmons - anatomy, clinical signs, differential diagnosis. Treatment.
3.	Abscesses and phlegmons around the mandible - anatomy, clinical signs, differential diagnosis. Treatment.
4.	Abscesses and phlegmons of the tongue, floor of the mouth, parapharyngeal space - anatomy, clinical signs, differential diagnosis. Treatment.
5.	Acute osteomyelitis of the jaws - clinical signs, differential diagnosis. Treatment.
6.	Chronic osteomyelitis of the jaws - clinical signs, differential diagnosis. Treatment.
7.	Lymphadenitis in the maxillofacial area. Clinical signs, differential diagnosis. Treatment.
8.	Odontogenic sinusitis. Clinical signs, differential diagnosis. Treatment.
9.	Specific inflammatory processes in the maxillofacial area – tuberculosis, syphilis. Clinical signs, methods of diagnosis, differential diagnosis. Treatment.
10.	Specific inflammatory processes in the maxillofacial area – actinomycosis. Clinical signs, methods of diagnosis, differential diagnosis. Treatment.
11.	HIV/AIDS - clinical signs, methods of diagnosis, treatment, prophylaxis.
12.	Treatment of acute inflammation from dental origin – basic principles of medication. Antibacterial drugs. Prescription.
13.	Life threatening complications associated with abscesses and phlegmons.
14.	Treatment of acute inflammation from dental origin - basic surgical principles. Types of incisions and drainage systems.
15.	Treatment of acute inflammation from dental origin – basic principles of medication. Nonsteroidal anti-inflammatory drugs (NSAIDs), antihistamines, immunotherapy. Prescription.

**Lectures of Oral and maxillofacial surgery
for 4th year Dental medicine students, Summer Term**

№	TOPIC
16.	Clinical death - clinical signs, methods of diagnosis. Management. Students' single-handed anesthesia appliance and tooth extraction.
17.	Local complications during dental extraction - clinical signs, methods of diagnosis. Management. Students' single-handed anesthesia appliance and tooth extraction.
18.	Hemorrhagia during and after dental extraction - methods of diagnosis. Management. Students' single-handed anesthesia appliance and tooth extraction.
19.	Postextraction alveolitis - clinical signs. Methods of diagnosis. Differential diagnosis. Treatment. Students' single-handed anesthesia appliance and tooth extraction.
20.	General complications during dental extraction - clinical signs, methods of diagnosis. Management. Students' single-handed anesthesia appliance and tooth extraction.
21.	Colloquium: Complications during and after anesthesia and dental extraction.
22.	Odontogenic jaw cysts - clinical signs, methods of diagnosis, differential diagnosis. Students' single-handed anesthesia appliance and tooth extraction.
23.	Odontogenic jaw cysts. Surgical treatment - methods of cystectomy and cystotomy. Students' single-handed anesthesia appliance and tooth extraction.
24.	Non-odontogenic jaw cysts - clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
25.	Periodontitis complications – odontogenic lymphadenitis. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
26.	Periodontitis complications – odontogenic sinusitis. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction
27.	Periodontitis complications – odontogenic osteomyelitis. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction
28.	Periodontitis complications – maxillary abscesses and phlegmons. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
29.	Periodontitis complications – abscesses and phlegmons around the mandible. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
30.	Focal infection of odontogenic origin. Clinical signs, methods of diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.

**Practicals of Oral and maxillofacial surgery
for 4th year Dental medicine students, Winter Term**

№	TOPIC
31.	Acute periodontitis – clinical signs, differential diagnosis, diagnosis clarity, complications. Students’ practice - anesthesia and tooth extraction.
32.	Acute periodontitis – principles of management Students’ practice - anesthesia and tooth extraction.
33.	Chronic periodontitis - clinical signs, differential diagnosis, diagnosis clarity, complications. Students’ practice - anesthesia and tooth extraction.
34.	Chronic periodontitis – surgical treatment. Apical osteotomy of the teeth in the lower jaw – features, types of incisions and their performance. Students’ practice - anesthesia and tooth extraction.
35.	Chronic periodontitis – surgical treatment. Apical osteotomy of the teeth in the upper jaw – features, types of incisions and their performance. Students’ practice - anesthesia and tooth extraction.
36.	Chronic periodontitis – surgical treatment. Hemisection and root amputation. Students’ practice - anesthesia and tooth extraction.
37.	Chronic periodontitis – surgical treatment. Tooth replantation and tooth extraction. Students’ practice - anesthesia and tooth extraction.
38.	Seminar: Periodontitis – classification, clinical signs, differential diagnosis, diagnosis clarity and manegment.
39.	Local complications by local anesthesia – clinical signs, diagnosis clarity and management. Students’ practice - anesthesia and tooth extraction.
40.	General complications by local anesthesia (intoxication, syncope, collapse, shock) - clinical signs, diagnosis clarity and management Students’ practice - anesthesia and tooth extraction.
41.	Allergic reactions (idiosyncrasy, urticaria, angioneurotic edema/Quincke’s disease, anaphylactic shock). Students’ practice - anesthesia and tooth extraction.
42.	Anesthesia techniques and tooth extraction in the upper jaw. Students’ practice - anesthesia and tooth extraction.
43.	Anesthesia techniques and tooth extraction in the lower jaw. Students’ practice - anesthesia and tooth extraction.
44.	Local anesthesia in children. Students’ practice - anesthesia and tooth extraction.
45.	Local anesthesia in inflammatory processes of the oral cavity and maxillofacial region. Students’ practice - anesthesia and tooth extraction.

**Practicals of Oral and maxillofacial surgery
for 4th year Dental medicine students, Summer Term**

№	TOPIC
46.	Clinical death - clinical signs, methods of diagnosis. Management. Students' single-handed anesthesia appliance and tooth extraction.
47.	Local complications during dental extraction - clinical signs, methods of diagnosis. Management. Students' single-handed anesthesia appliance and tooth extraction.
48.	Hemorrhagia during and after dental extraction - methods of diagnosis. Management. Students' single-handed anesthesia appliance and tooth extraction.
49.	Postextraction alveolitis - clinical signs. Methods of diagnosis. Differential diagnosis. Treatment. Students' single-handed anesthesia appliance and tooth extraction.
50.	General complications during dental extraction - clinical signs, methods of diagnosis. Management. Students' single-handed anesthesia appliance and tooth extraction.
51.	Colloquium: Complications during and after anesthesia and dental extraction.
52.	Odontogenic jaw cysts - clinical signs, methods of diagnosis, differential diagnosis. Students' single-handed anesthesia appliance and tooth extraction.
53.	Odontogenic jaw cysts. Surgical treatment - methods of cystectomy and cystotomy. Students' single-handed anesthesia appliance and tooth extraction.
54.	Non-odontogenic jaw cysts - clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
55.	Periodontitis complications – odontogenic lymphadenitis. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
56.	Periodontitis complications – odontogenic sinusitis. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction
57.	Periodontitis complications – odontogenic osteomyelitis. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction
58.	Periodontitis complications – maxillary abscesses and phlegmons. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
59.	Periodontitis complications – abscesses and phlegmons around the mandible. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
60.	Focal infection of odontogenic origin. Clinical signs, methods of diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.

**Lectures of Oral and maxillofacial surgery
for 5th year Dental medicine students, Winter Term**

№	TOPIC
61.	Maxillary fractures. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
62.	Zygoma complex and nasal fractures. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
63.	Life threatening complications associated with maxillofacial trauma (asphyxiation, hemorrhagia, shock). Clinical signs. Methods of diagnosis. Treatment.
64.	Life threatening complications associated with maxillofacial trauma (commotio cerebri, cerebral compression, cerebral contusion). Clinical signs. Differential diagnosis. Methods of diagnosis. Treatment.
65.	Teeth trauma. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
66.	Tumors in oral cavity and maxillofacial area. Etiology and pathogenesis. Characteristics. Basic principles of diagnosis Clinical signs. Methods of diagnosis. Classification based on localisation. Clinical classification – TNM-system.
67.	Oral and maxillofacial preneoplastic disorders. Classification. Etiology and pathogenesis. Erythroplakia and leukoplakia - clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
68.	Oral and maxillofacial preneoplastic disorders. Lichen ruber planus (Lichen planus), cheilitis, melanoplakia, cornu cutaneum, keratoacanthoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
69.	Prophylaxis and early diagnosis of oral cancer.
70.	Benign soft tissue tumors of the skin and oral cavity. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
71.	Benign odontogenic tumors of the jaws. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
72.	Benign nonodontogenic tumors of the jaws. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
73.	Malignant soft tissue tumors of oral cavity (lips, cheeks, gingiva). Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
74.	Malignant soft tissue tumors of oral cavity (tongue, floor of the mouth, hard palate). Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
75.	Maxillary carcinoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.

**Lectures of Oral and maxillofacial surgery
for 5th year Dental medicine students, Summer Term**

№	TOPIC
76.	Maxillary sarcoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment
77.	Mandible carcinoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment
78.	Mandible sarcoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
79.	Benign tumors of salivary glands. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
80.	Malignant tumors of salivary glands. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
81.	Lymphoreticular tumors. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
82.	Treatment of malignant oral and maxillofacial tumors – basic principles.
83.	Complications associated with treatment of malignant oral and maxillofacial tumors. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
84.	Pre-prosthetic preparation of the jaws – soft tissue surgery. Indications and methods.
85.	Pre-prosthetic preparation of the jaws – bone surgery. Indications and methods
86.	Plastic and reconstructive surgery – basic principles. Free skin grafts. Bone grafts.
87.	Plastic and reconstructive surgery. Flap surgery. Filatov – Gillies tube pedicle.
88.	Clefts in maxillofacial area. Classification. Etiology and pathogenesis. Clinical signs. Treatment.
89.	Jaw deformities and acquired defects in maxillofacial area. Treatment.
90.	Acquired defects in maxillofacial area. Treatment.

**Practicals of Oral and maxillofacial surgery
for 5th year Dental medicine students, Winter Term**

№	TOPIC
61.	Soft tissue trauma. Classification. Wounds treatment. Students' single-handed anesthesia appliance and tooth extraction.
62.	Teeth trauma. Classification. Traumatic tooth luxation. Clinical signs, methods of diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
63.	Tooth expulsion – treatment. Students' single-handed anesthesia appliance and tooth extraction.
64.	Partial fracture of alveolar process of the jaws. Clinical signs, methods of diagnosis, examination. Students' single-handed anesthesia appliance and tooth extraction.
65.	Splinting in tooth luxation, tooth expulsion, fracture of alveolar process. Students' single-handed anesthesia appliance and tooth extraction.
66.	Colloquium: Dental trauma and alveolar process trauma.
67.	Impacted teeth. Clinical signs, methods of diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
68.	Tooth eruption disorders. Clinical signs, methods of diagnosis, differential diagnosis, treatment. Students' single-handed anesthesia appliance and tooth extraction.
69.	Dental extraction in medically compromised patients (endocrine disorders). Students' single-handed anesthesia appliance and tooth extraction.
70.	Dental extraction in medically compromised patients (hematopoietic system disorders). Students' single-handed anesthesia appliance and tooth extraction.
71.	Dental extraction in medically compromised patients (mental and neurological diseases). Students' single-handed anesthesia appliance and tooth extraction.
72.	Dental extraction in medically compromised patients (cardiovascular diseases). Students' single-handed anesthesia appliance and tooth extraction.
73.	Dental extraction in medically compromised patients (pregnant woman). Students' single-handed anesthesia appliance and tooth extraction.
74.	Paraclinical tests in the oral surgery. Students' single-handed anesthesia appliance and tooth extraction.
75.	Medication in oral surgery - antibacterial, nonsteroidal anti-inflammatory drugs (NSAIDs), hemostatics, tranquilizers. Students' single-handed anesthesia appliance and tooth extraction.

**Practicals of Oral and maxillofacial surgery
for 5th year Dental medicine students, Summer Term**

№	TOPIC
76.	Hypertrophy of the oral mucosa – diagnosis clarity, surgical management. Students’ single-handed anesthesia appliance and tooth extraction.
77.	Exostoses of the jaws - diagnosis clarity, surgical management. Students’ single-handed anesthesia appliance and tooth extraction.
78.	Splinting in periodontal diseases – indications and techniques. Students’ single-handed anesthesia appliance and tooth extraction.
79.	Periodontal diseases – surgical management. Techniques. Students’ single-handed anesthesia appliance and tooth extraction.
80.	Surgical treatment of periodontal diseases – regeneration methods. Students’ single-handed anesthesia appliance and tooth extraction.
81.	Surgical treatment of periodontal diseases – muco-gingival surgery. Students’ single-handed anesthesia appliance and tooth extraction.
82.	Preprosthetic surgery – deepening of the vestibular sulcus of the upper and lower jaw - techniques. Students’ single-handed anesthesia appliance and tooth extraction.
83.	Closure of oroantral perforations – vestibular techniques. Students’ single-handed anesthesia appliance and tooth extraction.
84.	Closure of oroantral perforations – palatine techniques. Students’ single-handed anesthesia appliance and tooth extraction.
85.	Orthodontic surgery – tooth extraction and corticotomy. Students’ single-handed anesthesia appliance and tooth extraction.
86.	Benign tumors of the soft tissue in the oral cavity (papiloma, fibroma). Epulides. Diagnosis clarity and management. Students’ single-handed anesthesia appliance and tooth extraction.
87.	Prophylaxis and early oral cancer detection. Behavior of the dentist. Students’ single-handed anesthesia appliance and tooth extraction.
88.	Retention cysts of the small salivary glands- diagnosis clarity and surgical treatment. Students’ single-handed anesthesia appliance and tooth extraction.
89.	PRACTICAL EXAMINATION: Patient’s evaluation. Diagnosis, differential diagnosis, anesthesia and tooth extraction. Complications. Management.
90.	PRACTICAL EXAMINATION: Patient’s evaluation. Diagnosis, differential diagnosis, anesthesia and tooth extraction. Complications. Management

Tutors:

1. **Petia Pechalova**, DDS, MD, PhD, associate professor, Department of oral surgery, oral and maxillo-facial surgeon
2. **Boyan Vladimirov**, DDS, MD, PhD, associate professor, Department of maxillofacial surgery, maxillo-facial surgeon
3. **Cvetan Cvetanov**, DDS, PhD, asistance professor, Department of oral surgery, oral surgeon
4. **Atanaska Dinkova**, DDS, asistance professor, Department of oral surgery, oral surgeon
5. **Yordan Burmov**, DDS, asistance professor, Department of oral surgery
6. **Bistra Blagova**, DDS, asistance professor, Department of oral surgery

Note: In this list are not included asistance professors from the Department of maxillofacial surgery.

Sources:

- ✚ Miloro M, Ghali GE, Larsen P, Waite P. Peterson's Principles of Oral and Maxillofacial Surgery, third edition (2012) PMPH – USA, Ltd. *ISBN-13: 978-1607951117*
- ✚ Hupp JR, Ellis E III, Tucker MR. Contemporary oral and maxillofacial surgery, fifth edition (2008) Mosby, Inc affiliate of Elsevier Inc. *ISBN 9780323049030*
- ✚ Andersson L, Kahnberg KE, Pogrel A. Oral and Maxillofacial Surgery (2010) Blackwell Publishing Ltd. *ISBN 978-1-4051-7119-9*

Prerequisites:

In order for the training in oral surgery to begin, the student should have successfully completed the 3rd year special course of Special Surgery including anesthetics in the dental medicine and oral surgery. Considering the main objectives and tasks of the oral and maxillofacial surgery during the course of the training it should prepare the students with optimal knowledge and practical skills in the main sections of the discipline. The students should learn the methods of anesthesia, teeth extraction, treatment of inflammatory diseases of odontogenic origin, diagnostics and emergency aid in traumas in the oral cavity and maxillofacial area, diagnosis of precancerous and tumor diseases, knowledge of congenital abnormalities - diagnostics and terms of treatment. They should master and gain lasting knowledge about paraclinical tests applied in oral and maxillofacial surgery as well as the ways and means of pharmacologically influencing pathological processes. After completing the training, students should have the following knowledge and skills:

TO BE ABLE TO SINGLE HANDEDLY PERFORM:

- Patient's evaluation, history and physical examination;
- Diagnosis of surgical diseases in the oral cavity;
- Preparation of the patient, the surgeon and the operating theatre;
- Hand disinfection methods;
- Application of local intraoral anesthesia:
- topical anesthesia;
- infiltration anesthesia;
- intraligamentary anesthesia;
- maxillary and mandibular nerve blocks;
- Typical (closed) extraction of permanent and primary teeth;
- Incisions in case of complicated tooth eruption;

- Incisions of intraoral abscesses;
- Replacement and wire stabilization of luxated teeth;
- Issuing prescriptions to patients
- Diagnosis and treatment of urgent diseases in dentistry;
- Management of medical emergencies in the dental office and providing consultation with a specialist;

TO BE FAMILIAR WITH AND SEND FOR CONSULTATION PATIENTS WITH:

- Patients with odontogenic and nonodontogenic bone cysts;
- Patient with fractures of the jawbones;
- Patients with pre-neoplastic and neoplastic intraoral pathology;
- Patients with congenital abnormalities in the oral cavity (clefts);
- Patients with dentoalveolar malformations;
- Abscesses and cellulitises in maxillofacial region;
- Pathology of the periodontium and oral mucosa;

4. Academic resources

The Departments should have the necessary number of lecturers, according to the accepted norms for teaching workload of a lecturer from the Medical University, Faculty of Dental Medicine - Plovdiv. The lecturer must have excellent theoretical and practical training and specialization in the disciplines "Oral Surgery" and "Maxillofacial Surgery" respectively. To participate actively in the plan of the Department of Scientific Research, guided by the latest achievements in the field.

5. Material resources.

The Departments must have the necessary number of clinical halls equipped with dental units, special tools and computers. The operating theatres must be equipped with a modern dental unit, an operating table, as well as with piezosurgery, laser therapy and implantology equipment.

6. Lectures.

The textbook of the Department can be found on the Faculty's website and contains information about the lecturing and the practical training of the students.

7. Clinical exercises.

Clinical exercises are held in clinical halls by groups of 5-7 students. Tests are provided for exercises.

They help evaluate :

- the degree of student's preparation
- students' knowledge and skills gained from the specific exercise.

Under the guidance and control of the assistant the students assess the medical history and status of the patient, place a preliminary clinical diagnosis, appoint laboratory tests and consultations with other specialists if necessary. After a final diagnosis, local anesthesia is placed and teeth extraction is performed.

Students fulfill the norms adopted at the Departmental Council:

Oral Surgery for the 4th and 5th year

1. Hygienic disinfection of hands -21 / 21 points /
2. Surgical disinfection of hands -21 / 21 points /
3. Operational field preparation -21 / 21 points /

4. Terminal local anesthesia – as indicated
 - A. Topical
 - B. Infiltration anesthesia
5. Nerve block anesthesia - 21/21 points /
 - A. Of the branches of n. Maxillaris
 - B. Of the branches of n. Mandibularis
6. Intraligamentary anesthesia - as indicated
7. Extraction of teeth -21 / 105 points /
 - A. Extraction of maxillary teeth
 - B. Extraction of mandibular teeth
8. Local anesthesia in children - as indicated
9. Extraction wound management - 21/21 points /
10. Treatment of localized alveolar osteitis - as indicated
11. Bleeding post extraction - management- as indicated
12. Incision in case of complicated tooth eruption - as indicated
13. Incisions in submucosal and subperiosteal abscesses - as indicated
14. Prescription of drugs in a surgical patient - 10/20 points /
15. Management of urgent situations in oral surgery / indication:
 - Acute and chronic exacerbated periodontitis
 - Complicated tooth eruption
 - Abscesses and cellulitises
 - Lymphadenitis
 - Sialoadenites
 - Acute sinusitis
 - Acute osteomyelitis
 - Perforation of the maxillary sinus
 - Acute arthritis of TMJ
 - Luxation of TMJ
 - Tooth trauma
 - Soft tissue trauma
 - Trigeminal neuralgia
16. Management of emergency situation /as indicated/:
 - Asthma attack
 - Hypertensive crisis
 - Angina pectoris

- Paroxysmal tachycardia
- Myocardial infarction
- Syncope
- Fall in resistance
- Shock
- Stroke
- Hyperglycaemic coma
- Hypoglycaemic coma
- Hysterical fainting
- Epileptic seizure
- Mechanical airway obstruction
- Allergic reactions
- Idiosyncrasy
- Urticaria
- Angioedema
- Anaphylactic shock

NOTE: OPERATION OBSERVATIONS ARE PERFORMED ACCORDING TO THE ADOPTED TRAINING PROGRAM.

Examination syllabus

Oral and Maxillofacial surgery for students 5th year

1. Abscesses and cellulitis of the face – anatomy, clinical signs, differential diagnosis. Treatment.
2. Maxillary abscesses and cellulitis – anatomy, clinical signs, differential diagnosis. Treatment.
3. Abscesses and cellulitis around the mandible - anatomy, clinical signs, differential diagnosis. Treatment.
4. Abscesses and cellulitis of the tongue, floor of the mouth, parapharyngeal space - anatomy, clinical signs, differential diagnosis. Treatment.
5. Acute osteomyelitis of the jaws - clinical signs, differential diagnosis. Treatment.
6. Chronic osteomyelitis of the jaws - clinical signs, differential diagnosis. Treatment.
7. Acute nonspecific lymphadenitis in the maxillofacial area. Clinical signs, differential diagnosis. Treatment.
8. Chronic nonspecific lymphadenitis in the maxillofacial area. Clinical signs, differential diagnosis. Treatment.
9. Acute odontogenic sinusitis. Clinical signs, differential diagnosis. Treatment.
10. Chronic odontogenic sinusitis. Clinical signs, differential diagnosis. Treatment.
11. Syphilis. Classification. Clinical signs, methods of diagnosis, differential diagnosis. Treatment. Prophylaxis.

12. Tuberculosis. Classification. Clinical signs, methods of diagnosis, differential diagnosis. Treatment. Prophylaxis.
13. Actinomycosis. Classification. Clinical signs, methods of diagnosis, differential diagnosis. Treatment. Prophylaxis.
14. HIV/AIDS - clinical signs in oral cavity, methods of diagnosis, treatment, prophylaxis.
15. Life threatening complications associated with abscesses and cellulitis (mediastinitis, facial vein thrombosis, cavernous sinus thrombosis, brain abscesses, others). Clinical signs, methods of diagnosis, differential diagnosis, treatment.
16. Odontogenic sepsis. Clinical signs, methods of diagnosis, differential diagnosis, treatment.
17. Treatment of acute inflammation from dental origin - basic surgical principles. Types of incisions and drainage systems.
18. Treatment of acute inflammation from dental origin – basic principles of medication. Antibacterial drugs. Prescription.
19. Treatment of acute inflammation from dental origin – basic principles of medication. Nonsteroidal anti-inflammatory drugs (NSAIDs), *antihistamines*, *immunotherapy*. Prescription.
20. Soft tissue cysts in oral cavity and maxillofacial area. Classification. Clinical signs, methods of diagnosis, differential diagnosis. Treatment.
21. Cysts of the jaws. Classification. Etiology and pathogenesis. Clinical signs. Methods of diagnosis.
22. Cysts of the jaws. Differential diagnosis. Treatment.
23. Salivary gland diseases. Methods of diagnosis.
24. Acute sialadenitis. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
25. Chronic sialadenitis. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
26. Reactive-*dystrophic* processes in *salivary glands* (sialoadenoses). Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
27. Sialolithiasis. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
28. Temporomandibular joint disorders – inflammatory and reactive-*dystrophic* . Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
29. Temporomandibular joint disorders - *subluxation*, *luxation*, contracture, ankylosis. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
30. Trigeminal neuralgia. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
31. Facial paresis and paralysis. *Paralysis* of the *hypoglossal* nerve. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
32. Soft tissue trauma in oral cavity and maxillofacial area. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
33. Teeth trauma. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
34. Maxillary fractures. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis.
35. Maxillary fractures. Treatment.
36. Mandible fractures. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis.
37. Mandible fractures. *Orthopedic treatment*.
38. Mandible fractures. Surgical and orthopedic-surgical treatment.
39. Zygoma complex fractures. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
40. Life threatening complications associated with maxillofacial trauma (asphyxiation, hemorrhagia, shock). Clinical signs. Methods of diagnosis. Treatment.
41. Life threatening complications associated with maxillofacial trauma (*commotio cerebri*, cerebral *compression*, cerebral *contusion*). Clinical signs. Differential diagnosis. Methods of diagnosis. Treatment.
42. Tumors in oral cavity and maxillofacial area. Etiology and pathogenesis. Characteristics. Basic principles of diagnosis Clinical signs. Methods of diagnosis. Classification based on localisation. Clinical classification – TNM-system.

43. Oral and maxillofacial preneoplastic disorders. Classification. Etiology and pathogenesis. *Erythroplakia* and leukoplakia - clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
44. Oral and maxillofacial preneoplastic disorders. *Lichen ruber planus* (lichen planus), cheilitis, melanoplakia, cornu cutaneum, *keratoacanthoma*. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
45. Benign soft tissue tumors of the skin and oral cavity. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
46. Benign odontogenic tumors of the jaws. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
47. Benign nonodontogenic tumors of the jaws. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
48. Malignant soft tissue tumors of oral cavity (lips, cheeks, gingiva, tongue, floor of the mouth, hard palate). Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
49. Maxillary carcinoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
50. Maxillary sarcoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
51. Mandible carcinoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
52. Mandible sarcoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
53. Benign tumors of salivary glands. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
54. Malignant tumors of salivary glands. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
55. Lymphoreticular tumors. Non-Hogkin lymphoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
56. Lymphoreticular tumors. Hogkin lymphoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
57. Treatment of malignant oral and maxillofacial tumors – basic principles.
58. Prophylaxis and early diagnosis of oral cancer.
59. Surgical approaches for the treatment of periodontal diseases – *resective surgical techniques*.
60. Surgical approaches for the treatment of periodontal diseases – *regenerative surgical techniques*
61. Surgical approaches for the treatment of periodontal diseases – *periodontal plastic surgery (mucogingival surgery)*. Deepening of the vestibular sulcus of the upper and lower jaw - techniques
62. *Mucogingival surgery - gingival recession*. Classification. Indications. Methods. Technique.
63. Pre-prosthetic preparation of the jaws. Indications and methods.
64. Plastic and reconstructive surgery – basic principles. *Free skin* grafts.
65. Plastic and reconstructive surgery. Flap surgery.
66. Clefts in maxillofacial area. Classification. Etiology and pathogenesis. Cleft lips. Clinical signs. Surgery deadlines. Treatment.
67. Clefts in maxillofacial area. Classification. Etiology and pathogenesis. Cleft palate. Clinical signs. Surgery deadlines. Treatment.
68. *Jaw deformities* and acquired defects in maxillofacial area. Treatment.

Sources:

- ✚ Hupp JR, Ellis E III, Tucker MR. Contemporary oral and maxillofacial surgery, fifth edition (2008) Mosby, Inc affiliate of Elsevier Inc. *ISBN 9780323049030*
- ✚ Andersson L, Kahnberg KE, Pogrel A. Oral and Maxillofacial Surgery (2010) Blackwell Publishing Ltd. *ISBN 978-1-4051-7119-9*

TRAINING PROGRAM FOR THE STATE PRACTICE
IN ORAL SURGERY

Duration: 30 workdays

First week

- 1. Anesthesia techniques in the oral surgery:**
 - a. Preparation of the patient
 - b. Premedication in the oral surgery
 - c. Nerve block anesthesia in the upper jaw
 - d. Nerve block anesthesia in the lower jaw
 - e. Anesthesia in children
 - f. Anesthesia by inflammatory process in the oral cavity and jaw-bones
 - g. Local complications by anesthesia
 - h. General complications by anesthesia

Second week

- 2. Tooth extraction:**
 - a. Indications and contraindications
 - b. Features by extraction of the different tooth groups
 - c. Surgical extraction of impacted teeth
 - d. Complications by and after tooth extraction

SEMINAR: ANESTHESIA END TOOTH EXTRACTION

Third week

- 3. Acute odontogenic infection (AOI):**
 - a. Difficult tooth eruption – clinical features, differential diagnosis, diagnosis clarity, treatment.
 - b. Periodontitis - clinical features, differential diagnosis, diagnosis clarity, treatment.
 - c. Osteomyelitis - clinical features, differential diagnosis, diagnosis clarity, treatment.
 - d. Lymphadenitis - clinical features, differential diagnosis, diagnosis clarity, treatment.
 - e. Sinusitis - clinical features, differential diagnosis, diagnosis clarity, treatment.
 - f. Abscesses and cellulites - clinical features, differential diagnosis, diagnosis clarity, treatment.
 - g. Main principles of the surgical treatment of the AOI
 - h. Main principles of the medical treatment of the AOI. Drug prescription

SEMINAR: ACUTE ODONTOGENIC INFECTION

Fourth week

- 4. Inflammatory diseases of the salivary glands.**
- 5. Temporomandibular diseases**
- 6. Traumatic injuries in the oral cavity and maxillofacial region**
 - a. First aid
 - b. Traumatic injuries of the soft tissue - clinical features, differential diagnosis, diagnosis clarity, treatment.
 - c. Tooth trauma - clinical features, differential diagnosis, diagnosis clarity, treatment.

- d. Fractures of the lower jaw - clinical features, differential diagnosis, diagnosis clarity, treatment.
- e. Fractures of the upper jaw - clinical features, differential diagnosis, diagnosis clarity, treatment.

SEMINAR: TRAUMATIC INJURIES IN THE ORAL CAVITY AND MAXILLOFACIAL REGION

Fifth week

7. Tumors in the oral cavity and jaw-bones

- a. Precancers - clinical features, differential diagnosis, diagnosis clarity, treatment.
- b. Benign tumors of the soft tissues in the oral cavity - clinical features, differential diagnosis, diagnosis clarity, treatment.
- c. Benign tumors of the jaw-bones - clinical features, differential diagnosis, diagnosis clarity, treatment.
- d. Oral carcinoma - clinical features, differential diagnosis, diagnosis clarity, treatment.
- e. The use of the TNM system for the tumors in the oral cavity
- f. Biopsy – types, techniques.
- g. Principles of treatment of the malignant tumors in the oral cavity and jaw-bone.

SEMINAR: TUMORS IN THE ORAL CAVITY AND JAW-BONES

Sixth week

8. Preprosthetic and periodontal surgery

- a. Preprosthetic surgery – soft tissue surgery
- b. Preprosthetic surgery – bone surgery
- c. Periodontal surgery – resection techniques
- d. Periodontal surgery – regenerating techniques
- e. Periodontal surgery – mucogingival surgery/plastic periodontal surgery

Obligatory manipulation minimum to be performed by each student during the state pregraduation practice:

- 1 Anesthesia and tooth extraction – 2.
- 2 Taking a history and present status, differential diagnosis and diagnosis clarity, treatment plan in out-patients – 10.
- 3 Taking a history and present status, differential diagnosis and diagnosis clarity, treatment plan and medical discussion in in-patients with inflammatory diseases – 3.
- 4 Taking a history and present status, differential diagnosis and diagnosis clarity, treatment plan and medical discussion in in-patients with fractures of the facial and jaw - bones – 3.
- 5 Taking a history and present status, differential diagnosis and diagnosis clarity, treatment plan and medical discussion in in-patients with neoplasm – 3.
- 6 Demonstration of operation of ambulatory patients - 3

EXAMINATION SYLLABUS

For State Examination

1. Historical development of the oral and maxillofacial surgery. Scope and aims. Oral surgery in Bulgaria.
2. Asepsis and antisepsis in oral surgery. Preparation of the patient and surgical team.
3. Patient evaluation in oral surgery. Patient's history and physical examination.
4. Paraclinical tests in oral surgery. Laboratory, microbiology, histology, cytology and imaging studies in oral surgery.
5. Pain – definition, etiology, classification. Pathways for superficial and deep somatic pain.
6. Basic surgical principles: wounds, haemostasis, wounds healing, impairment of the healing process, tissues and teeth replacement.
7. Anesthesia in oral surgery. General information. Types of anesthesia. Preparation of the patient for anesthesia (premedication).
8. Local anesthetics. Pharmacology.
9. Vasoconstrictors. Pharmacology, indications and contraindications for their use in oral surgery.
10. Anatomical and physiological characteristics of the maxillofacial area. Terminal local anesthesia - topical anesthesia, infiltrative anesthesia, intraligamentary anesthesia. Techniques.
11. Regional block anesthesia of the maxilla (intra- and extraoral). Anatomic and topographic features. Techniques.
12. Regional block anesthesia of the mandible (intra- and extraoral). Anatomic and topographic features. Techniques.
13. Anesthesia in children - characteristics. Features of regional anesthesia in oral and maxillofacial areas in inflammatory processes.
14. Local complications of local anesthesia. Clinical signs, diagnosis, management.
15. General complications of local anesthesia. Clinical signs, diagnosis, management.
16. General anesthesia in oral surgery. Types of anesthetic agents. Management and guidance of anesthesia. Complications, prevention.
17. Pharmacological management of pain – non-opioid, opioid and adjuvant analgesics. Types, mechanism of action.
18. Common surgical instruments – types, design and principles of use.
19. High-frequency electrosurgery, piezosurgery and lasers in oral surgery.
20. Surgical sutures and suturing – instruments and materials. Types of sutures and knots. Techniques.
21. Tooth extraction (exodontia). Indications and contraindications. Preparation of the patient.
22. Instruments for tooth extraction – types, design and principles of use.
23. Anatomical and mechanical considerations for tooth extraction - steps and methods. Dentist's and patient's care for the extraction wound. Extraction wound healing – characteristics of the process.
24. Surgical (open, atypical) extraction. Indications, techniques.
25. Removal of partially erupted and impacted teeth. Indications, contraindications, techniques, complications. Gernectomy.
26. Tooth extractions in medically compromised patients (disorders of cardiovascular and respiratory systems). Management.
27. Tooth extractions in medically compromised patients (disorders of blood and hematopoietic system). Management.
28. Tooth extractions in medically compromised patients (endocrine and renal disorders). Management.
29. Tooth extractions in medically compromised patients (hepatic disorders, patients on corticosteroid therapy, received radiotherapy; pregnant woman). Management.
30. Complications during tooth extraction. Local complications. Clinical signs, diagnosis, management.

31. Complications during tooth extraction. General complications. Clinical signs, diagnosis, management.
32. Complications after tooth extraction. Clinical signs, diagnosis, management.
33. Inflammatory processes in the oral cavity and maxillofacial area. Incidence, etiology and pathogenesis. Pathways of infection dissemination. General characteristics of the inflammation in the oral cavity and maxillofacial area. Patient assessment.
34. Tooth eruption disorders. Classification. Retained tooth eruption. Etiology and pathogenesis. Clinical signs. Methods of diagnosis and treatment.
35. Tooth eruption disorders. Classification. Complicated tooth eruption. Etiology and pathogenesis. Clinical signs. Methods of diagnosis and treatment.
36. Periodontitis. Etiology and pathogenesis. Classification. Acute apical periodontitis. Clinical signs. Methods of diagnosis and treatment.
37. Chronic apical periodontitis. Clinical signs. Methods of diagnosis and treatment. (hemisection, replantation, root amputation).
38. Apical osteotomy. Indications, contraindications. Preoperative preparation of the tooth. Techniques, complications, prevention.
39. Inflammatory processes (abscesses and phlegmons) of the face – anatomy, clinical signs, differential diagnosis. Treatment.
40. Maxillary abscesses and phlegmons - anatomy, clinical signs, differential diagnosis. Treatment.
41. Abscesses and phlegmons around the mandible - anatomy, clinical signs, differential diagnosis. Treatment.
42. Abscesses and phlegmons of the tongue, floor of the mouth, parapharyngeal space - anatomy, clinical signs, differential diagnosis. Treatment.
43. Acute osteomyelitis of the jaws - clinical signs, differential diagnosis. Treatment.
44. Chronic osteomyelitis of the jaws - clinical signs, differential diagnosis. Treatment.
45. Acute nonspecific lymphadenitis in the maxillofacial area. Clinical signs, differential diagnosis. Treatment.
46. Chronic nonspecific lymphadenitis in the maxillofacial area. Clinical signs, differential diagnosis. Treatment.
47. Acute odontogenic sinusitis. Clinical signs, differential diagnosis. Treatment.
48. Chronic odontogenic sinusitis. Clinical signs, differential diagnosis. Treatment.
49. Syphilis. Classification. Clinical signs, methods of diagnosis, differential diagnosis. Treatment. Prophylaxis.
50. Tuberculosis. Classification. Clinical signs, methods of diagnosis, differential diagnosis. Treatment. Prophylaxis
51. Actinomycosis. Classification. Clinical signs, methods of diagnosis, differential diagnosis. Treatment.
52. HIV/AIDS. Presentation in oral cavity and maxillofacial area. Clinical signs, methods of diagnosis, treatment, prophylaxis.
53. Life threatening complications associated with abscesses and phlegmons (thrombosis of the cavernous sinus, mediastinitis, brain abscess, etc.). Clinical signs, methods of diagnosis, differential diagnosis. Treatment.
54. Sepsis from odontogenic origin. Clinical signs, methods of diagnosis, differential diagnosis. Treatment.
55. Treatment of acute inflammation from dental origin - basic surgical principles. Types of incisions and drainage systems.
56. Treatment of acute inflammation from dental origin – basic principles of medication. Antibacterial drugs. Prescription.
57. Treatment of acute inflammation from dental origin – basic principles of medication. Nonsteroidal anti-inflammatory drugs (NSAIDs), antihistamines, immunotherapy. Prescription.
58. Soft tissue cysts in oral cavity and maxillofacial area. Classification. Clinical signs, methods of diagnosis, differential diagnosis. Treatment.

- 59.** Cysts of the jaws. Classification. Etiology and pathogenesis. Clinical signs, methods of diagnosis.
- 60.** Cysts of the jaws. Differential diagnosis. Treatment.
- 61.** Salivary gland diseases. Main methods of diagnosis.
- 62.** Acute sialadenitis. Clinical signs, methods of diagnosis, differential diagnosis. Treatment.
- 63.** Chronic sialadenitis. Clinical signs, methods of diagnosis, differential diagnosis. Treatment.
- 64.** Reactive-dystrophic processes in salivary glands (sialoses). Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 65.** Sialolithiasis. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 66.** Temporomandibular joint disorders: inflammatory and reactive-dystrophic (arthritis and arthrosis). Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 67.** Temporomandibular joint disorders: subluxation, luxation, contracture, ankylosis. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 68.** Trigeminal neuralgia. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 69.** Facial paresis and paralysis. Paralysis of the hypoglossal nerve. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 70.** Soft tissue trauma in oral cavity and maxillofacial area. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 71.** Teeth trauma. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 72.** Maxillary fractures. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis.
- 73.** Maxillary fractures. Methods of treatment.
- 74.** Mandible fractures. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis.
- 75.** Mandible fractures. Orthopedic principles and methods of management. Indication and contraindications.
- 76.** Mandible fractures. Surgical and orthopedic-surgical methods of management. Indications and techniques.
- 77.** Zygoma complex fractures. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 78.** Life threatening complications associated with maxillofacial trauma (asphyxiation, hemorrhagia, shock). Clinical signs. Methods of diagnosis. Treatment.
- 79.** Life threatening complications associated with maxillofacial trauma (commotio cerebri, cerebral compression, cerebral contusion). Clinical signs. Differential diagnosis. Methods of diagnosis. Treatment.
- 80.** Tumors in oral cavity and maxillofacial area. Etiology and pathogenesis. Characteristics. Basic principles of diagnosis Clinical signs. Methods of diagnosis. Classification based on localisation. Clinical classification – TNM-system.
- 81.** Oral and maxillofacial preneoplastic disorders. Classification. Etiology and pathogenesis. Erythroplakia and leukoplakia - clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 82.** Oral and maxillofacial preneoplastic disorders. Lichen ruber planus (Lichen planus), cheilitis, melanoplakia, cornu cutaneum, keratoacanthoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 83.** Benign soft tissue tumors of the skin and oral cavity. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 84.** Benign odontogenic tumors of the jaws. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 85.** Benign nonodontogenic tumors of the jaws. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
- 86.** Malignant soft tissue tumors of oral cavity (lips, cheeks, gingiva, (tongue, floor of the mouth, hard palate). Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.

87. Maxillary carcinoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
88. Maxillary sarcoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
89. Mandible carcinoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
90. Mandible sarcoma. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment
91. Benign tumors of salivary glands. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
92. Malignant tumors of salivary glands. Classification. Clinical signs. Methods of diagnosis. Differential diagnosis. Treatment.
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