

Faculty of Medicine, University of Rijeka

Course: Maxillofacial Surgery

Course coordinator: Professor Margita Belušić, MD, PhD

Department: Department of Maxillofacial Surgery

Study: Integrated undergraduate and graduate university study of Dental Medicine in English

Year of study: 5th year/6th year

Academic year: 2025/2026

COURSE SYLLABUS

Course information (basic description, general information, teaching overview, required equipment, and preparation, etc.):

Maxillofacial Surgery is a compulsory course in the 5th year/6th year of the Integrated undergraduate and graduate university study of Dental Medicine in English. It consists of 30 hours of lectures and 60 hours of practicals, total(7 **ECTS**).

30 hours of practical and 30 hours of lecture in X. semester (4 ECTS) and 30 hours of practical in XI semester (3 ECTS).

The course is conducted in the Clinic of Maxillofacial Surgery (hospital, outpatient clinic at the polyclinic, operating rooms of the Clinic), while lectures are held in the large lecture room at Sušak.

The aim of the course is to get students acquainted with the specifics of maxillofacial surgery, a surgical branch that deals with the treatment of diseases of the mouth, jaw, face and certain pathological conditions of the head and neck. The aim is to familiarize the students with the most common diseases, their clinical features, the basics of diagnostics, treatment options, complications during and after surgery, the basics of patient monitoring and control systems, medical record keeping. In addition to the acquisition of basic theoretical knowledge, special emphasis is placed on training students to perform a proper physical examination of a maxillofacial patient, to identify differences between physiological and pathological conditions, correct medical conclusions about differential diagnostic possibilities, i.e. everything that every physician encounters and needs to know in practice. The emphasis is on the quality of physical examination, especially in the early detection of tumors and the consequences of delays in diagnosing this functionally and aesthetically significant region of the human body.

Course content: Introduction to the surgical anatomy of the maxillofacial region, clinical and radiological diagnostics. Traumatology; emergencies in head and neck injuries, examination and treatment of the injured patient, etiology, frequency and clinical features of head and neck soft tissue injuries, and specificities of surgical treatment. Fractures and treatment of viscerocranial bones – lower jaw, bones of the middle third of the face (upper jaw, facial bone, orbit), the upper third of the face (fronto-naso-orbito-ethmoidal fractures), injuries associated with neurocranial fractures. Functional and aesthetic complications after delayed or inadequate treatment. Introduction to the dentoalveolar segment in children and adults. Basics of dental medicine relevant to medical students. Inflammation in the jaw and face (odontogenic and other nonspecific

and specific inflammations) and complications. Salivary glands diseases. Head and neck tumors; tumors of the skin, lips, oral cavity and oropharynx, paranasal cavities, metastatic progression, treatment and reconstruction options of postoperative defects. Deformities (skeletal, dentofacial, and other deformities). Malformations (cleft lip and/or palate and other congenital malformations). Introduction to temporomandibular joint disorders. Orofacial pain (differential diagnostics).

Course teaching:

Classes are conducted through lectures and practicals in X. and XI. semester. Lectures cover theoretical knowledge, whereas practicals allow students to experience practical work with patients under the supervision of assistants. Practicals are taught in small groups during the morning clinical shift. After classes are finished, students take a written test, which is a prerequisite for taking the final, oral exam. By completing all course activities and taking the mandatory written test and final exam, the student acquires 7 ECTS credits.

Required reading:

1. Ivica Lukšić et al. Maksilofacijalna kirurgija, Ljevak, Zagreb, 2019.
2. Carrie Newlands, Cyrus Kewala, Oral and Maxillofacial Surgery (Oxford Specialist Handbooks in Surgery) 3rd, Oxford University Press; 3rd edition, December 30. 2020. Selected chapters: Trauma, Oral cavity and oropharyngeal cancer, Surgical dermatology, Salivary glands, Orthognathic surgery, Cleft lip and palate, The temporomandibular joint.
3. Jatin Shah, Snehal Patel, Bhuvanesh Singh, Richard Wong. Jatin Shah's Head and Neck Surgery and Oncology 5th Edition, Elsevier, April 2019. Selected chapter: Chapter 5 (Nasal cavity and paranasal sinuses).
4. Lectures are available to students in digital form on the Department's website:
Professor Margita Belušić-Gobić:
"Oral and Oropharyngeal Cancers"
Professor Mirna Juretić:
"Differential Diagnosis of Orofacial Pain"
Professor Mirna Juretić:
"Head and Neck Skin Cancers: Surgical Treatment"

Recommended for additional reading:

1. Aljinović-Ratković N., Traumatologija maksilofacijalne regije, teacher-made instructional materials, Zagreb, 2001.
2. Virag M., Disekcija vrata: logika i klasifikacija. Medicinar 40 (suppl. 1); 45-50, 1999.
3. Virag M., Deset predrasuda i nešto više činjenica o melanomu. Medicinar 45(3); 14-18, 2004.
4. Teacher-made instructional materials „Osnove kirurških šavi i lokalnih režnjeva“, Medicinski fakultet Sveučilišta u Zagrebu, 2002.
5. Drago Prgomet et al., Tumori glave i vrata, Medicinska naklada, Zagreb, 2019.
6. Bagatin M., Virag M. et al.: Maksilofacijalna kirurgija, textbook, Školska knjiga, Zagreb, 1991.

Course teaching plan

List of lectures (with titles and learning outcomes):

L1. Introduction to maxillofacial surgery **Introduction to traumatology in MFS**

Learning outcomes:

To familiarize with the subject of maxillofacial surgery.

To acquire basic knowledge about examining patients with pathological conditions of the oral cavity, face, and neck and the basics of diagnostic methods.

To explain, as part of the introduction to traumatology, the concept of life-threatening injuries in the face and mouth.

To familiarize with the soft tissue injuries of the face, oral cavity, and neck.

L2. Introduction to tumors of the maxillofacial region

Learning outcomes:

To classify tumors, histological types, etiology and epidemiology.

To explain the TNM classification.

To identify and explain the metastasis of tumors of the maxillofacial region.

To identify and explain lymphogenic metastasis.

To define neck regions.

To explain the importance of surgical treatment of lymphogenic metastases of the neck.

To describe neck dissection.

L3. Skin tumors

Learning outcomes:

To explain the etiology, epidemiology, and most common histological types of malignant head and neck tumors.

To explain and describe the most common clinical features of basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) of the skin.

To explain the specificities of TNM classification of skin tumors.

To explain the principles and basic surgical methods of skin tumor treatment.

To explain the important characteristics of malignant melanoma.

To explain the differences between malignant melanoma (MM) in relation to BCC and SCC.

To explain the histological classification of MM.

To explain the metastasis of MM.

To explain the diagnostic algorithm for MM.

To define "misconceptions" about MM.

L3. Lip tumors

Learning outcomes:

To define lip tumors, describe the clinical features, diagnostics.

To describe the basic methods and indications of surgical treatment of wedge excision and vermillionectomy.

To explain the TNM classification of lip tumors.

To explain the metastasis of lip (lower and upper) tumors.

To explain the basics of reconstructive methods used for postoperative defects.

L5. Oral and oropharyngeal tumors

Learning outcomes:

To explain the term precancerous lesions, especially erythroplakia.

To define the etiology, epidemiology, and histological types of tumors.

To explain the difference between oral and oropharyngeal tumors.

To explain the TNM classification and metastasis of these tumors.

To explain the symptomatology of tumors according to anatomical localization in the oral cavity and oropharynx.

To describe the principles of surgical treatment depending on the stage of malignant disease.

To explain the term “commando” procedure.

L6. Paranasal (maxillary sinus) tumors

Learning outcomes:

To explain and describe malignant maxillary sinus tumors and their spread into the surrounding tissue (their symptomatology depending on the direction of tumor spread).

To explain the basics about the difficulties of sinus tumor treatment.

To explain the poor prognosis of paranasal tumors.

L7. Soft-tissue injuries of the head and neck

Traumatology – mandibular fractures

Learning outcomes:

To familiarize with the soft tissue injuries of the face, oral cavity, and neck.

To explain the basic features of mandibular fractures.

To define the clinical features/symptoms of fractures, classification of fractures, and basic treatment methods.

L8. Traumatology – fractures of the maxilla

Learning outcomes:

Explain the occurrence of maxilla fractures and the concept of vertical and horizontal supports and their importance in surgical treatment.

Acquire the knowledge in symptomatology of maxilla fractures and basic classification.

Describe fractures by classification and important facts in the approach to treatment of fractures.

L9. Traumatology – fractures of the middle and upper third of the face

Learning outcomes:

To explain the classification of fractures according to the affected bones of individual layers of the face.

To define the characteristics of clinical features of facial, orbital, NOE, FOND, and panfacial fractures.

To explain the basic treatment methods for a particular fracture.

L10. Inflammation in the maxillofacial region

Learning outcomes:

To define odontogenic inflammation and explain its etiology, classification, and clinical features.

To describe the routes and modes of spreading through the anatomical head and neck spaces.

To explain surgical and pharmacological treatment methods.

To explain and describe the complications of odontogenic inflammation: mediastinitis, propagation of inflammation into the orbit and endocranium.

To explain the causes of osteomyelitis, its clinical features and treatment.

L11. Nontumor and tumor salivary gland diseases

Learning outcomes:

To list the most common nontumor salivary gland diseases.

To explain the methods of salivary gland diagnostics.

To explain the etiology and symptoms of salivary gland inflammation and differentiate the symptoms in acute conditions from subchronic to chronic.

To explain the causes and symptoms of sialolithiasis and to define diagnostic and treatment methods.

To explain the specificities of autoimmune salivary gland diseases and the importance of clinical monitoring.

To define epidemiological differences in benign and malignant tumors of minor and major salivary glands.

To define the most common histological types of major salivary gland tumors.

To explain the difference between the clinical features of benign and malignant parotid gland tumors.

To explain the surgical treatment methods of major salivary tumors.

L12. Bone tumors and basics of reconstruction of bone defects

Learning outcomes:

Define the most common types of tumors that occur in the jaw bones. Learn the basics about ameloblastoma, treatment options. Describe fibrous dysplasia of bone. Explain metastatic bone tumors, diagnosis, approach to treatment. Explain the basics of surgical techniques for dealing with bone defects.

L13. Deformities

Learning outcomes:

To explain the term deformities, to classify deformities, list them, and describe the most common ones.

To define orthognathic surgery and its basic principles (treatment methods, the importance of a team approach).

L14. Malformations

Learning outcomes:

To explain the term malformation, the basics of its clinical features, and the term “congenital disorder”.

To define and classify clefts.

To explain the treatment algorithm for clefts and the importance of a team approach to treatment of clefts.

To explain the concept of “microform” clefts and complications in case they are not recognized.

To explain the basic surgical techniques for cleft lip and palate treatment.

To explain the differences between deformities and malformations.

L15. Temporomandibular joint disorders**Orofacial pain / Differential diagnosis of painful head and neck conditions****Learning outcomes:**

To classify temporomandibular disorders and clinical symptomatology.
To explain treatment methods.
To explain arthroscopy in diagnostics and treatment.
To explain the terms arthrocentesis and arthroscopy.
To describe orofacial pain and diagnostic problems.
To explain the most common manifestations of painful head and neck conditions.
To describe trigeminal neuralgia – symptomatology, classification, drug and surgical treatment.
To describe the differential diagnosis of pain in the oral cavity, head, and neck.

List of seminars (with titles and learning outcomes):**List of practicals (with titles and learning outcomes):**

Practicals from the course Maxillofacial Surgery and dentistry are performed in the hospital ward, outpatient clinic, in the operating room for minor surgical procedures under local anesthesia, and in the operating room for general anesthesia. Students will actively participate in the work of a physician assistant with patients during history-taking and making a diagnosis. Students will be present during bandaging of operated patients and during minor surgical procedures under both local and general anesthesia. Students will be introduced to the method of examination of the oral cavity, face and neck, they will perform it independently, under the supervision of an assistant, and will be familiarized with the methods of detecting the basic signs of a disease.

Each assistant will organize the practicals according to the thematic units presented to students in lectures. Before attending the practicals, students are required to acquire theoretical knowledge that they will perform in practice. As needed, depending on the current pathology of the hospitalized patients, the assistants will use a computer presentation to clarify in detail the particular topic to the students.

Student obligations:

Students are required to attend all practicals regularly. Two absences are allowed.

Exam (exam taking, detailed exam description of the oral/written/practical part, point distribution, grading criteria):***Evaluation (ECTS credit system):***

Student grading is conducted according to the current **Ordinance on Studies of the University of Rijeka** and the **Ordinance on Student Assessment and Evaluation at the Faculty of Medicine in Rijeka** (approved by the Faculty Council).

Students are graded according to the ECTS (A–E) and numerical system (1–5).

Out of a total of 100 grade points (100%), the student can obtain a maximum of 50% of grade points during classes and a maximum of 50% of grade points on the final oral exam.

There are no colloquia to assess student knowledge during classes. After classes are finished, students take a written test, which is a prerequisite for taking the **final oral exam**.

The student can obtain a maximum of **50 grade points on the test**, with the required level of 50% of solved questions for passing the test, i.e. at least 25 points.

The prerequisite for taking the final oral exam is obtaining a minimum of **25 grade points** during classes (provided that the test is passed with 50% correct answers, i.e. 20 points on the test).

After passing the oral examination, the final grade is formed by adding up the points obtained during classes and the points obtained on the oral exam.

Written test (maximum 50 grade points)

After attending classes (lectures and practicals), the student acquires grade points by taking a test consisting of 60 questions.

The pass threshold (sufficient) is **50% (30) correct answers** and the student can obtain the points according to the following table:

Correct answers	Number of points
60	50
59	49
58	48
57	47
56	46
55	45
54	44
53	43
52	42
51	41
50	40
49	39
48	38
47	37
46	36
45	35

44	34
43	33
42	32
41	31
40	30
39, 38	29
36, 37	28
34, 35	27
32, 33	26
30, 31	25
0–29	0

Class attendance:

The student should compensate for any absence from practicals.

The final exam is oral.

Success on the oral exam is converted into grade points as follows:

grade	grade points
insufficient	0
sufficient	25-33
good	34-40
very good	41-45
excellent	46-50

The student should obtain at least 25 points (50% of the total 50 points) on the final exam to obtain the final grade.

The final grade and knowledge assessment is the sum of grade points obtained during classes and on the final exam.

The final student assessment is performed as follows:

- 90–100%, excellent (5), corresponds to grade A on the ECTS scale
- 75–89.9 %, very good (4), corresponds to grade B on the ECTS scale
- 60–74.9 %, good (3), corresponds to grade C on the ECTS scale
- 50–59.9 %, sufficient (2), corresponds to grade D on the ECTS scale
- 0–49.9 %, insufficient (1), corresponds to grade F on the ECTS scale

Who can take the final exam:

- students who obtained **25 and more grade points** during classes.

Who cannot take the final exam:

- students who obtained less than **25 grade points** during classes
- students who did not take the written test
- students who did not compensate for their absence from practicals.

Possibility of teaching the course in another language:

No

Other information important for students regarding the course:

Additional information regarding the course and exam terms can be found on the Department's website.

SCHEDULE for the academic year 2025/2026 (XI.SEMESTER)

Date	Lectures (time and place)	Seminars (time and place)	Practicals (time and place)	Lecturer
02.10.2025. (Thursday)			P1 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
09.10.2025 (Thursday)			P2 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD

16.10.2025 (Thursday)			P3 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
23.10.2025. (Thursday)			P4 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
30.10.2025 (Thursday)			P5 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
06.11.2025 (Thursday)			P6 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD

13.11.2025 (Thursday)			P7 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
20.11.2025. (Thursday)			P8 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
27.11.2025 (Thursday)			P9 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
04.12.2025. (Thursday)			P10 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD

11.12.2025 (Thursday)			P11 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
18.12.2025 (Thursday)			P12 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
08.01.2026 (Thursday)			P13 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD
15.01.2026 (Thursday)			P14,P15 10,30-12,00 Clinic of Maxillofacial Surgery	PRACTICALS Professor Margita Belušić, MD, PhD Professor Robert Cerović, MD, PhD Arijan Zubović, MD David Harmicar, MD Luka Vulić, MD

**AFTER ATTENDED LECTURES AND PRACTICALS
IT IS MANDATORY
TO TAKE WRITTEN EXAMINATION**

List of lectures, seminars, and practicals:

	LECTURES (topics)	Teaching hours	Location

	SEMINARS (topics)	Teaching hours	Location
S1			
	Total number of seminar hours		

	PRACTICALS (topics)	Teaching hours	Location
P1	Introduction to Maxillofacial surgery	2	Department of Maxillofacial Surgery
P2	Trauma - presentation of the patient, anamnesis, examination	2	Department of Maxillofacial Surgery
P3, P4	Traumas of soft tissues, mandible, maxilla	4	Department of Maxillofacial Surgery
P5	Salivary glands, clinical examination, history, UTZ and other diagnostics	2	Department of Maxillofacial Surgery
P6, P7	Inflammation in the MFK region, odontogenic etiology and X-ray diagnostics	4	Department of Maxillofacial Surgery
P8	Active participation in the treatment of facial and oral cavity wounds	2	Department of Maxillofacial Surgery
P9, P10	Tumors - in general Tumors of the maxillofacial region	4	Department of Maxillofacial Surgery
P11	Tumors of the skin of the face and lips	2	Department of Maxillofacial Surgery
P12	Tumors of the oral cavity	2	Department of Maxillofacial Surgery
P13	Diseases of the temporomandibular joint	2	Department of Maxillofacial Surgery
P14	Deformities	2	Department of Maxillofacial Surgery

P15	Progenia	2	Department of Maxillofacial Surgery
	Total number of practical hours	30	

Practicals in XI. semester (30) - II. block

P1 - P15 (30 hours of practicals)

	TERMS EXAM
1.	
2.	
3.	
4.	
5.	
6.	

Students, after having listened to the lectures in the previous semester, i.e. acquired theoretical knowledge and completed the first "block" of exercises that followed the topic of the lectures, will now be able to carry out practical work with patients in a more meaningful and high-quality manner. Under the supervision of assistants, they will perform examinations (inspection and palpation), take medical histories, read X-ray images, and participate in procedure planning. They will also participate in the work (assist) in selected surgical procedures.

In this way, they will renew their knowledge according to the thematic units that they have adopted earlier.

Professor Margita Belušić, MD, PhD