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ФИО: Ястребов Олег Александрович
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**Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
NAMED AFTER PATRICE LUMUMBA
RUDN University
Institute of Medicine**

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

Pediatric Maxillofacial Dentistry

course title

Recommended by the Didactic Council for the Education Field of:

31.05.03 Dentistry

field of studies / speciality code and title

**The course instruction is implemented within the professional education
programme of higher education:**

Dentistry

higher education programme profile/specialisation title

2025

1. COURSE GOAL(s)

The goal of the course "**Pediatric maxillofacial surgery**" is to equip students with the knowledge and skills in the field of diagnosis, treatment and prevention of major surgical dental diseases and injuries of the maxillofacial region in children.

2. REQUIREMENTS FOR LEARNING OUTCOMES

Mastering the course (module) "**Pediatric maxillofacial surgery**" is aimed at the development of the following competences /competences in part: GC-1; GPC-5; GPC-6; PC-1; PC-2; PC-6.

Table 2.1. List of competences that students acquire through the course study

Competence code	Competence descriptor	Competence formation indicators (within this course)
GC-1.	Being able to implement critical analysis of problem situations based on systems approach, develop an action strategy.	GC-1.1. Analysing the problem situation as a system identifying its components and links between them.
GPC-5	Being able to examine patients to determine a diagnosis when solving professional tasks	GPC-5.1. Gathering anamnesis by analysing the patient's complaints, making a physical examination at a dental appointment. GPC-5.2. Formulating a preliminary diagnosis and drawing up a plan for laboratory and instrumental examinations of a dental patient. GPC-5.3. Compiling medical documentation for a dental patient in accordance with regulatory requirements. GPC-5.8. Conducting differential diagnosis with other diseases/conditions, including the urgent ones. GPC-5.9. Making a diagnosis based on the current international statistical classification of diseases and health problems.
GPC-6	Being able to prescribe non-drug and drug treatment, monitor its efficacy and safety when solving professional tasks	GPC-6.1. Developing a plan for dental disease treatment taking into account the diagnosis, age and clinical picture in accordance with the current procedures for the provision of medical care, clinical guidelines (treatment protocols) on the provision of medical care taking into account the medical care standards. GPC-6.2. Selecting medical products (including dental materials) for drawing up a comprehensive plan for dental disease treatment. Following up the treatment of a patient.
PC- 1	Being able to make an examination of a patient in order to determine a diagnosis.	PC-1.1. Making an initial examination and/or reexamination of a patient in order to make a preliminary diagnosis. PC-1.2. Receiving information from patients (their relatives/legal representatives); conducting a questionnaire survey of patients regarding their general health status; identifying concomitant diseases in order to make a preliminary diagnosis. PC-1.3. Detecting if patients have dentoalveolar,

Competence code	Competence descriptor	Competence formation indicators (within this course)
		facial anomalies, deformities and prerequisites for their development, defects in the crowns of teeth and dentition on the basis of the patient examination; laboratory, instrumental, and additional examinations in order to make a preliminary/final diagnosis. PC-1.4. Detecting if patients have risk factors for oncopathology (including various background processes, precancerous conditions) based on laboratory, instrumental and additional examinations in order to make a preliminary/final diagnosis. PC-1.5. Making a preliminary/final diagnosis based on the patient examination; laboratory and instrumental examinations.
PC-2	Being able to prescribe, monitor the efficacy and safety of non-drug and drug treatment	PC-2.6 Providing orthopaedic treatment for persons with defects in teeth, dentition within the temporization procedure, rehabilitation of single defects in the dentition, dental prostheses of up to three units (excluding dental implants prosthetics), partial and complete removable laminar denture using modern treatment methods approved for use in medical practice.
PC-6	Being able to analyze and present in public medical information based on evidence-based medicine, participate in scientific research, introduce new methods and techniques aimed at protecting public health	PC-6.1. Searching for medical information based on evidence-based medicine, interpreting data from scientific publications and/or preparing a presentation to make medical information, the results of scientific research public.

3.COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course refers to the core/variable/elective* component of (B1) block of the higher educational programme curriculum.

* - Underline whatever applicable.

Within the higher education programme students also master other (modules) and / or internships that contribute to the achievement of the expected learning outcomes as results of the course study.

Table 3.1. The list of the higher education programme components/disciplines that contribute to the achievement of the expected learning outcomes as the course study results

Competence code	Competence descriptor	Previous courses/modules*	Subsequent courses/modules*
UC-1	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	Dental Assistant (therapist); Dental Assistant (orthopedist); Human Anatomy - Head and Neck Anatomy; Pediatric dentistry; Dental prosthetics (simple prosthetics);	

		Immunology, clinical immunology; Mathematics; Medical genetics in dentistry; Orthodontics and Pediatric prosthetics; Otorhinolaryngology; Dental prosthetics (complex prosthetics); Prosthetics with complete lack of teeth; Psychology, pedagogy; Physics; Philosophy; Obstetrics; Pathophysiology - Pathophysiology of the head and neck; Chemistry of biogenic elements**; Medical rehabilitation; Dental teeth modeling**; History of Medicine; Bioelements in medicine**; Medical elementology**;	
GPC-5	Able to conduct a patient examination in order to establish a diagnosis in solving professional problems	Dental Assistant (orthopedist); Head and neck diseases; Dental prosthetics (simple prosthetics); Cariesology and diseases hard tissues of teeth; Medical genetics in dentistry; Local anesthesia and anesthesiology in dentistry; General surgery; Orthodontics and Pediatric prosthetics; Dental prosthetics (complex prosthetics); Prosthetics with complete lack of teeth; Surgical diseases; Oral surgery; Maxillofacial and gnathic surgery; Internal illnesses; Gerontostomatology and	

		diseases of the mucous membrane oral cavity; Neurology; Periodontology; Psychiatry and Narcology; Endodontics; Dermatovenerology; Pediatric dentistry; Dental propaedeutics diseases; Ophthalmology; Emergency conditions in outpatient dental practice; Pathological anatomy - Pathanatomy of the head and neck; Obstetrics; Pediatrics;	
GPC-6	Able to prescribe, monitor the effectiveness and safety of non-drug and drug treatment in solving professional problems	Dermatovenerology; Pediatric dentistry; Head and neck diseases; Dental prosthetics (simple prosthetics); Immunology, clinical immunology; Cariesology and diseases hard tissues of teeth; Clinical dentistry; Medical genetics in dentistry; General surgery; Orthodontics and Pediatric prosthetics; Dental prosthetics (complex prosthetics); Prosthetics with complete lack of teeth; Surgical diseases; Oral surgery; Maxillofacial and gnathic surgery; Fundamentals of military training. Life safety; Internal illnesses; Gerontostomatology and diseases of the mucous membrane oral cavity; Neurology;	

		Periodontology; Pediatrics; Psychiatry and Narcology; Endodontics; Medical rehabilitation; Pharmacology; Materials Science; Obstetrics; Emergency conditions in outpatient dental practice;	
PC-1	Capable of examining the patient in order to establish a diagnosis	Dental Assistant (therapist); Dental Assistant (surgeon); Dental assistant (Assistant to the pediatric dentist); Dental Assistant (orthopedist); Dental Assistant (hygienist); Orthodontics and Pediatric prosthetics; Pathological anatomy - Pathanatomy of the head and neck; Dental prosthetics (complex prosthetics); Prosthetics with complete lack of teeth; Fundamentals of military training. Life safety; Radiation diagnostics; Medical rehabilitation; Cone beam computer tomography in diagnostics, planning and evaluation effectiveness dental solution; Pediatric dentistry; Immunology, clinical immunology; Head and neck diseases; Dental prosthetics (simple prosthetics); Cariesology and diseases hard tissues of teeth; Medical genetics in dentistry; Local anesthesia and anesthesiology in dentistry;	

		Otorhinolaryngology; Dental propaedeutics diseases; Oral surgery; Maxillofacial and gnathic surgery; Obstetrics; Gerontostomatology and diseases of the mucous membrane oral cavity; Periodontology; Endodontics; Three-dimensional x-ray diagnostic methods in dentistry**; Three-dimensional computer teeth modeling**; Chemistry of biogenic elements**; Ophthalmology; Dental teeth modeling**; Pathophysiology - Pathophysiology of the head and neck;	
PC-2	Capable of prescribing, monitoring the efficacy and safety of non-drug and drug treatments	Pediatric dentistry; Head and neck diseases; Cariesology and diseases hard tissues of teeth; Local anesthesia and anesthesiology in dentistry; Orthodontics and Pediatric prosthetics; Oral surgery; Maxillofacial and gnathic surgery; Gerontostomatology and diseases of the mucous membrane oral cavity; Periodontology; Endodontics; Innovative technologies in dentistry; Dental physiotherapy diseases; Clinical dentistry; Bioelements in medicine**; Medical elementology**;	

		Dental propaedeutics diseases; Dental prosthetics (simple prosthetics); Medical genetics in dentistry; Dental prosthetics (complex prosthetics); Prosthetics with complete lack of teeth; Infectious diseases phthisiology; Organization of general care sick; Dental Assistant (surgeon); Dental Assistant (therapist); Dental Assistant (Pediatric);	
PC-6	Able to analyze and publicly present medical information based on evidence-based medicine, to participate in scientific research, to introduce new methods and techniques aimed at protecting public health	Dental prosthetics (simple prosthetics); Immunology, clinical immunology; Medical genetics in dentistry; Dental prosthetics (complex prosthetics); Prosthetics with complete lack of teeth; Pharmacology; Ophthalmology; Clinical researches; Clinical dentistry;	

* To be filled in according to the competence matrix of the higher education programme.

4. COURSE WORKLOAD AND ACADEMIC ACTIVITIES

The total workload of the course "**Pediatric maxillofacial surgery**" is **3 credits** (108 academic hours).

*Table 4.1. Types of academic activities during the periods of higher education programme mastering (**full-time training**)**

Type of academic activities	Total academic hours	Semesters/training modules			
		10 (A)			
<i>Contact academic hours</i>	68	68			
including:					
Lectures (LC)	-	-			
Lab work (LW)	68	68			

Type of academic activities		Total academic hours	Semesters/training modules			
			10 (A)			
Seminars (workshops/tutorials) (S)		-	-			
<i>Self-studies</i>		31	31			
<i>Evaluation and assessment (exam/passing/failing grade)</i>		9	9			
Course workload	ac.h.	108	108			
	credits.	3	3			

* To be filled in regarding the higher education programme correspondence training mode.

5. COURSE CONTENTS

Table 5.1. Course contents and academic activities types

Course module title	Course module contents (topics)	Academic activities types
Section 1 Anesthesia in pediatric surgical dental practice. Tooth extraction in children	Topic 1.1. Anatomical and physiological features of the child's body. Indications and contraindications for general and local anesthesia during outpatient dental surgery in children. The value of premedication. Types of local anesthesia, features of its implementation in children. Emergency conditions at an outpatient dental appointment.	LW
	Topic 1.2. Indications and features of the extraction of temporary and permanent teeth in children. Complications during and after tooth extraction, their prevention and elimination.	LW
	Topic 1.3. Tactics of a dentist in the presence of supernumerary, impacted and dystopic teeth in children.	LW
Section 2 Inflammatory diseases of the maxillofacial region in children.	Topic 2.1. Features of the course of odontogenic inflammatory processes in childhood. Inflammatory processes of the soft tissues of the face: lymphadenitis, abscess, phlegmon.	LW
	Topic 2.2. Clinical picture of acute and chronic periostitis of the jaw bones in children of different ages.	LW
	Topic 2.3. Acute odontogenic osteomyelitis of the jaws, hematogenous osteomyelitis of newborns and young children.	LW
	Topic 2.4. Clinical and radiological forms of chronic osteomyelitis of the jaws, principles of rehabilitation of children.	LW
	Topic 2.5. Odontogenic inflammatory cysts in children. Possible complications, their prevention.	LW
Section 3 Diseases of the salivary glands in children.	Topic 3.1. Inflammatory diseases of the salivary glands in children. Clinic, diagnosis and treatment.	LW
	Topic 3.2. Salivary disease. Etiology, pathogenesis, clinical picture, diagnosis, treatment, possible complications.	LW

	Topic 3.3. Retention cysts of small and large salivary glands. Etiology, pathogenesis, clinical picture, diagnosis, treatment, possible complications.	LW
Section 4 Trauma of the maxillofacial region in children.	Topic 4.1. Dental injuries in children: clinic, treatment, methods of immobilization, outcomes.	LW
	Topic 4.2. Bruises and fractures of the bones of the face in children. Clinic, diagnostics. Methods of conservative and surgical treatment of fractures in children, healing time, possible complications and methods for their prevention.	LW
	Topic 4.3. Injuries of soft tissues of the mouth and face in children. Features of primary surgical treatment of facial wounds.	LW
	Topic 4.4. Burns and frostbite. Clinical picture, treatment, complications. General indications for plastic surgery in childhood. Principles of rehabilitation of children who have suffered trauma to the maxillofacial region.	LW
Section 5 Diseases of the temporomandibular joint in children.	Topic 5.1. Primary bone diseases of the temporomandibular joint. Osteoarthritis, secondary deforming osteoarthritis, bone ankylosis, neoarthrosis : etiology, pathogenesis, clinical picture. Diagnosis, principles of complex treatment of diseases of the temporomandibular joint in children. Methods of surgical treatment, age indications. Goals and objectives of orthodontic treatment. Methods for preventing the development of primary bone diseases.	LW
	Topic 5.2. Functional diseases of the temporomandibular joint in childhood and adolescence. Etiology, pathogenesis, clinical manifestations. Additional examination methods (electromyography, axiography, tomography of the TMJ). Diagnosis, treatment, prevention.	LW
Section 6 Congenital and hereditary diseases of the maxillofacial region in children.	Topic 6.1. Congenital cysts and fistulas of the maxillofacial region and neck. Dermoid and epidermoid cysts.	LW
	Topic 6.2. Congenital cleft lip and palate. Prevalence, classification, anatomical and functional disorders, impact on the overall development of the child's body. Secondary deformations of the jaws with cleft palate. Age indications for surgical treatment, the purpose of operations. Clinical examination of children with congenital cleft lip and palate.	LW
	Topic 6.3. Congenital pathology of the oral mucosa: anomalies of attachment of the frenulum and tongue, small vestibule of the oral cavity. Clinical picture, indications for surgical treatment, methods of operations, features of the	LW

	postoperative period.	
Section 7 Tumors and tumor-like processes of the maxillofacial region in children.	Topic 7.1. Benign and malignant tumors of the soft tissues of the face and oral cavity in children. Classification, clinical picture, diagnosis, differential diagnosis. Tumors and tumor-like processes of the salivary glands in children.	LW
	Benign and malignant tumors of the bones of the face in children. Odontogenic formations - cysts, odontogenic tumors of the jaws. Etiology, clinical picture, diagnosis.	LW
	Topic 7.2. Features of the clinical course of tumors and tumor-like formations in children. Tactics of surgical treatment of neoplasms of the maxillofacial region in children, indications and contraindications for the use of radiation therapy, principles of complex rehabilitation of children. The principle of oncological alertness at an outpatient dental appointment.	LW

* - to be filled in only for **full**-time training: *LC* - lectures; *LW* - lab work; *S* - seminars.

6. CLASSROOM EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Classroom equipment and technology support requirements

Type of academic activities	Classroom equipment	Specialised educational / laboratory equipment, software, and materials for course study (if necessary)
Lecture	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations. (Classrooms 245, 249)	Technical means: multimedia projector, laptop, Interactive complex Lumien 86" LMP8604MLRU, WiFi available Internet access. Software: Microsoft products (OS, office suite, including MS Office / Office 365)
Lab-work	An auditorium for laboratory work, individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and equipment.	Visual aids, dental equipment and surgical instruments for extractions, phantoms, drugs, extracted teeth, x-rays, computer presentation, computers, projector, tables, dental equipment and surgical instruments for emergency care
Self-studies	Classroom for self-studies of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to the internet.	

7. RESOURCES RECOMMENDED FOR COURSE STUDY

Main readings:

- Pediatric oral and maxillofacial surgery: Publisher: Saunders; 1st edition (April 9, 2004) Language: English. Hardcover: 488 pages. ISBN 978-0-7216-9691-1
- Kutcipal, E. (2013). Pediatric oral and maxillofacial surgery. *Dental Clinics*, 57(1), 83-98.
- Koch G. et al. (ed.). Pediatric dentistry: a clinical approach. – John Wiley & Sons, 2017.

Additional readings:

- Gonçalves, J., Marques, H., Saleiro, R., Ferreira, Â., Ferreira, A., Ferreira, Â. T., & Ferreira Sr, A. (2023). Ewing's sarcoma of the zygoma: a very rare location. *Cureus*, 15(3).
- Railean, S., Gudumac, E., Bernic, J., Poștaru, C., & Ursu, D. (2023). Pediatric Tumors And Congenital Anomalies In Oral & Maxillo-Facial Surgery.
- Bouchard, C., Troulis, M. J., & Kaban, L. B. (2022). Pediatric Dentoalveolar Surgery. In *Peterson's Principles of Oral and Maxillofacial Surgery* (pp. 191-210). Cham: Springer International Publishing.
- Kaban, L. B., Bouchard, C., & Troulis, M. J. (2009). A protocol for management of temporomandibular joint ankylosis in children. *Journal of Oral and Maxillofacial Surgery*, 67(9), 1966-1978.
- Troulis, M. J., Troulis, M., & Kaban, L. B. (2013). *Minimally invasive maxillofacial surgery*. PMPH-USA.

Resources of the information and telecommunications network "Internet":

1. RUDN ELS and third-party ELS, to which university students have access on the basis of concluded agreements:

- RUDN Electronic Library System - RUDN EBS <http://lib.rudn.ru/>
- ELS "University Library Online" <http://www.biblioclub.ru>
- EBS Yurayt <http://www.biblio-online.ru>
- ELS "Student Consultant" www.studentlibrary.ru
- EBS "Lan" <http://e.lanbook.com/>
- EBS "Trinity Bridge"

2. Databases and search engines:

- electronic fund of legal and normative-technical documentation <http://docs.cntd.ru/>
- Yandex search engine [https:// www .yandex.ru/](https://www.yandex.ru/)
- Google search engine <https://www.google.ru/>
- Abstract database SCOPUS [http:// www . elsescience . en / products / scopus /](http://www.elsescience.en/products/scopus/)

Learning toolkits for self-studies during the development of the discipline:*

1. A course of lectures, presentations, video materials on the discipline "**Pediatric maxillofacial surgery**".

2. Guidelines for the implementation and execution of control and independent work on the discipline "**Pediatric maxillofacial surgery**"

* - all educational and methodological materials for independent work of students are placed in accordance with the current procedure on the page of the discipline **in TUIS** (the university telecommunication educational and information system).

8. EVALUATION TOOLKIT AND GRADE SYSTEM FOR ASSESSMENT

Evaluation Toolkit (ET) and a point-rating system (PRS)* for assessment the level of competence formation (part of competencies) based on the results of mastering the discipline "**Pediatric Oral and Maxillofacial Surgery**" are presented in the Appendix to this Work Program of the discipline.

* - ET and PRS are formed on the basis of the requirements of the relevant local regulatory act of the RUDN

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS' COMPETENCES LEVEL UPON COURSE COMPLETION

Evaluation materials and point-rating system* for assessing the level of competence formation (GC-1; GPC-5; GPC-6; PC-1; PC-2; PC-6) based on the results of mastering the discipline «Pediatric Oral and Maxillofacial Surgery» are presented in the Appendix to this Work Program of the discipline.

* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

DEVELOPERS:

Associate professor, Department of
Pediatric Dentistry and
Orthodontics

Position, educational department

Im. Katbeh

Signature

name and surname.

HEAD OF EDUCATIONAL DEPARTMENT:

Department of Pediatric Dentistry
and Orthodontics

educational department

N.S. Tuturov

Signature

name and surname.

HEAD OF HIGHER EDUCATION PROGRAMME:

Deputy Director for Academic
Affairs, Medical Institute, Head
department, professor of the
Department of propaedeutics of
dental diseases

Position, educational department

S.N. Razumova

Signature

name and surname.