Ministry of Science and Higher Education of the Russian Federation
Federal State Autonomous Institution of Higher Education
“National Research Nuclear University “MEPhI”

INSTITUTE OF ENGINEERING PHYSICS FOR BIOMEDICINE

APPROVED НТС ИФИБ

Protocol No. 3.1

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ACADEMIC COURSE OUTLINE

СТОМАТОЛОГИЯ И ЧЕЛЮСТНО-ЛИЦЕВАЯ ХИРУРГИЯ / STOMATOLOGY AND MAXILLOFACIAL SURGERY

Educational program track (speciality) [1] 31.05.01 General Medicine

Semester	**Labour input, credits**	**Total course academic, hours**	**Lectures, hrs.**	**Practical sessions, hrs.**	**Laboratory sessions, hrs.**	**In the form of practical studies, hrs.**	**Independent studies, hrs.**	**Independent studies monitoring, hrs.**	**Course progress, Exam/Pass-fail exam/Term**
7	3	108	20	40	0		48	0	PFE
Total	3	108	20	40	0	40	48	0	

ABSTRACT

To provide students with systematic theoretical and applied knowledge about the nature, methods, means, and principles of diagnosis and treatment of head and neck diseases, as well as to prepare students to implement diagnostic and therapeutic tasks.

1. ACADEMIC COURSE GOALS AND OBJECTIVES

The objective of this course is to provide students with systematic theoretical and applied knowledge about the nature, methods, tools, and principles of diagnosis and treatment of head and neck diseases, as well as to prepare them for diagnostic and therapeutic tasks.

The objectives of this course are:

- to study the classifications of dental and periodontal diseases; congenital malformations of the craniomaxillofacial region; principles of surgical treatment; basic oral hygiene; treatment and prevention of purulent-inflammatory diseases of the maxillofacial region; treatment and prevention of traumatic injuries to soft tissues and bones of the maxillofacial region;
- to develop the willingness and ability to apply knowledge and skills in professional activities, taking into account specific economic, environmental, and social factors within the framework of the regulatory system governing the circulation of medicines;
- to develop the willingness and ability to apply knowledge and skills in the treatment of patients with maxillofacial pathologies;
- to develop the skills, abilities, and competencies necessary for planning and organizing the provision of specialized medical care to patients with various diseases of the face and neck

2. PLACE OF THE ACADEMIC COURSE IN THE MAIN HIGHER EDUCATION CURRICULUM

This course is part of the educational program developed by the participants in the educational relationship. It is a clinical discipline and contributes to the development of professional competencies, complementing and deepening the knowledge, skills, and abilities acquired through mastery of other clinical disciplines.

The study of this course is preceded by the study of the following disciplines: Normal and Pathological Anatomy, Normal and Pathological Physiology, Immunology, Topographic Anatomy and Operative Surgery, Pharmacology, Radiopharmaceuticals, Propaedeutics of Internal Medicine, General Surgery, and Radiation Diagnostics.

The study of this course contributes to the preparation of students for successful mastery of subsequent clinical disciplines and practices.

3. DEVELOPED COMPETENCIES AND INTENDED LEARNING OUTCOMES

Universal and/or general professional competencies:

Competency code and title	Code and title of competency-based rubrics

Professional competencies in compliance with the goals and professional knowledge areas:

Professional activity goal	**Professional activity knowledge area**	**Professional competency code and title; Based on the professional standard, experience analysis**	**Code and title of competency-based rubrics**
medical			
Diagnostics of diseases and pathological conditions of the patients.	Individuals (patients); the population; the set of means and technologies aimed at creating conditions for preserving and strengthening the health of the adult population	ПК-3.2 [1] - Capable of conducting patient examinations to establish a diagnosis *The base:* Professional standard: 02.009	З-ПК-3.2[1] - Know: - clinical diagnosis establishment algorithm; - patient history-taking and physical examination methodology; - laboratory and instrumental research methods for health assessment to establish a diagnosis; - semiotics of diseases of different organs and systems; - structure, principles of the current International Statistical Classification of Diseases and Related Health Problems (hereinafter - ICD).; У-ПК-3.2[1] - Be able to: - conduct patient history-taking and physical examination; - interpret history, physical examination data, laboratory and instrumental results to recognize a condition or establish the presence/absence of a disease, establish a diagnosis; - distinguish and recognize in each specific case tissue damage, the reaction to it, and the form of adaptability; - develop a patient examination plan, justify the necessity and scope of laboratory and instrumental examination; - identify main pathological conditions, symptoms and syndromes, nosological forms in the patient according to the current ICD.;

			В-ПК-3.2[1] - Possess skills in: - patient history-taking and physical examination; Formulating a preliminary diagnosis; - developing a patient examination plan; Interpreting laboratory and instrumental results; - establishing a diagnosis considering the current ICD
Providing primary medical care in outpatient settings and day hospital settings.	Individuals (patients); the population; the set of means and technologies aimed at creating conditions for preserving and strengthening the health of the adult population	ПК-3.3 [1] - Able to provide primary medical care in an outpatient setting *The base:* Professional standard: 02.009	З-ПК-3.3[1] - Know: - general issues of organizing medical care for the population and organizing medical care for the adult population in outpatient settings, including at home; - features of medical care using telemedicine technologies; - Clinical picture, differential diagnosis, features of the course of the disease, complications and outcomes of internal diseases; - diagnostic criteria for the most common diseases of internal organs and systems; - indications for referring patients for specialist consultations according to clinical guidelines and considering relevant medical care standards; - indications for referring patients for specialized medical care in inpatient settings and day hospitals according to clinical guidelines and considering relevant medical care standards; - features of managing and treating elderly patients in outpatient settings. ; У-ПК-3.3[1] - Be able to: - perform differential diagnosis of internal

			diseases; - monitor the course of physiological pregnancy; - justify the need for referring patients to specialist consultations; - recognize the main and concomitant diseases; - assess disease or condition severity - the degree of organ and/or system damage or functional impairment due to the disease/condition or its complications; - determine management, examination and treatment tactics for patients with specific diseases (nosological units) depending on disease severity and condition, according to clinical guidelines and considering relevant medical care standards.; В-ПК-3.3[1] - Possess skills in: - conducting differential diagnosis with other diseases/conditions, including emergencies; - interpreting data obtained from patient consultations with specialists; - prescribing additional tests to clarify the diagnosis; - formulating a clinical diagnosis; - prescribing treatment according to clinical guidelines and considering relevant medical care standards.

4. PEDAGOGIC POTENTIAL OF THE COURSE

Pedagogic tracks/objectives	**Pedagogic goals (code)**
Professional education	Establishing conditions for: formation of responsibility for professional choice, professional development and professional decisions (B18)
Professional education	Establishing conditions for: formation of motivation to improve the quality of medical care to the population and the desire to follow the rules and norms of interaction between the doctor, colleagues and the patient, contributing to the creation of the most

	favorable environment for the patient's recovery (B34)

5. ACADEMIC COURSE STRUCTURE AND CONTENT

Academic course sections, their scope, terms of study and assessment:

No.	Academic course section name	Weeks	Lectures/ Practical (seminars)/ Laboratory sessions, hrs.	Compulsory current assessment (form*, week)	Maximum grade per section**	Section assessment (form*, week)	Competency-based rubrics
	7 Semester						
1	The First Section	1-8	10/20/0		25	T-8	З-ПК-3.2, У-ПК-3.2, В-ПК-3.2, З-ПК-3.3, У-ПК-3.3, В-ПК-3.3
2	The Second Section	9-16	10/20/0		25	T-15	З-ПК-3.2, У-ПК-3.2, В-ПК-3.2, З-ПК-3.3, У-ПК-3.3, В-ПК-3.3
	Totals for 7 Semester		20/40/0		50		
	Assessment events for 7 Semester				50	PFE	В-ПК-3.2, З-ПК-3.3, У-ПК-3.3, В-ПК-3.3, З-ПК-3.2, У-ПК-3.2

* – abbreviated name of assessment

** – 100 maximum points per semester including a pass/fail exam and (or) an exam

Abbreviated current assessment forms and section assessment

Abbreviation	Full name
T	Testing
PFE	Pass/fail examination

SYLLABUS

Weeks	Topics / Content	Lect., hrs.	Pr./sem., hrs.	Lab., hrs.
	7 Semester	20	40	0

1-8	**The First Section**	10	20	0
1 - 8	**Dental diseases and their complications**	All		
	Dental diseases and their complications	10	20	0
	Dental diseases	Online		
	Purulent-inflammatory diseases of the maxillofacial region	0	0	0
9-16	**The Second Section**	10	20	0
9 - 12	**Maxillofacial Traumatology**	All		
	Maxillofacial Traumatology	5	10	0
	Traumatic Injuries to the Maxillofacial Region	Online		
		0	0	0
13 - 16	**Cicatricial Deformities of the Face and Neck**	All		
	Cicatricial Deformities of the Face and Neck	5	10	0
		Online		
		0	0	0

Abbreviated names of online options:

Abbreviation	**Full name**
EC	E-course
FtM	Full-text material
FtL	Full-text lectures
VM	Video materials
AM	Audio materials
Prs	Presentations
T	Tests
ERM	E-reference materials
IS	Interactive site

PRACTICAL SESSIONS TOPICS

Weeks	**Topics / Content**
	7 Semester
1 - 4	**Dental Diseases and Their Complications** Dental Diseases Review of the theoretical material of the academic discipline; Solving practical problems Preparation for ongoing assessment
5 - 8	**Purulent-inflammatory diseases of the maxillofacial region** Review of the theoretical material of the academic course; Solving practical problems Preparation for ongoing assessment
9 - 12	**Traumatic injuries of the maxillofacial region** Preparation for classroom training: Review of the theoretical material of the academic discipline; Solving practical problems Preparation for ongoing assessment
13 - 16	**Cicatricial deformities of the face and neck** Preparation for classroom training: Review of the theoretical material of the academic discipline; Solving practical problems Preparation for ongoing assessment

6. EDUCATIONAL TECHNOLOGIES

The use of information technology in the educational process for this discipline is carried out in accordance with the approved Regulation on the Electronic Information and Educational Environment of NRNU MEPhI.

The electronic learning management system (e-LMS) is used to implement educational programs in face-to-face, distance, and blended learning modes.

The system implements the following main functions:

- Creating and managing classes,
- Creating courses,
- Organizing student enrollment in courses,
- Providing access to educational materials for students,
- Publishing student assignments,
- Assessing student assignments, administering tests, and tracking learning progress,
- Organizing interaction between participants in the educational process.

The system integrates with additional services, enabling such features as a work calendar, video communication, multi-user document editing, creating questionnaires, and an interactive whiteboard.

List of information technologies

- Checking homework and providing consultations through the electronic educational environment.
- Using electronic presentations during practical classes. – A set of educational videos

7. ASSESSMENT TOOLKIT

The assessment toolkit ensures verification of the intended learning outcomes achievement (competency-based rubrics) using current, midterm and interim assessment of the course.

The link between developed competencies and their assessment is presented in the following table:

Competency	**Achievement rubrics**	**Assessment activity (Syl 1)**
ПК-3.2	З-ПК-3.2	PFE, T-8, T-15
	У-ПК-3.2	PFE, T-8, T-15
	В-ПК-3.2	PFE, T-8, T-15
ПК-3.3	З-ПК-3.3	PFE, T-8, T-15
	У-ПК-3.3	PFE, T-8, T-15
	В-ПК-3.3	PFE, T-8, T-15

Educational achievement rubrics scales

The scale of each assessment activity varies from 0 to the maximum established point, inclusive. The final assessment of the course is performed on a 100-point scale and represents the sum

of the points earned by the student in the section assessments, framework of current and interim assessment.

Sections and interim assessments are considered passed when the student achieves a minimum score equal to 60% of the maximum. The final grade is assigned only upon passing all sections and the interim assessment.

The final grade is assigned in accordance with the following scale:

<table>
<tr><th>Total score</th><th>Rating on a 4-point scale</th><th>Pass/fail examination</th><th>ECTS assessment</th></tr>
<tr><td>90-100</td><td>5 – «excellent»</td><td rowspan="7">«pass»</td><td>A</td></tr>
<tr><td>85-89</td><td rowspan="3">4 – «good»</td><td>B</td></tr>
<tr><td>75-84</td><td>C</td></tr>
<tr><td>70-74</td><td rowspan="2">D</td></tr>
<tr><td>65-69</td><td rowspan="2">3 – «satisfactory»</td></tr>
<tr><td>60-64</td><td>E</td></tr>
<tr><td>below 60</td><td>2 – «fail»</td><td>«fail»</td><td>F</td></tr>
</table>

An “excellent” grade indicates a deep and solid mastery of the program material by a student who presents their answers consistently, clearly, and logically, is able to closely link theory with practice, and uses materials from monographic literature in their answers.

A “good” grade corresponds to a student’s solid knowledge of the material, who presents their answers competently and to the point, without any significant inaccuracies.

A “satisfactory” grade corresponds to the basic level of mastery of the material by the student, in which the main material has been mastered, but its details have not been assimilated, the answers contain inaccuracies, insufficiently correct wording and logical inconsistencies.

A grade “pass” corresponds to at least a basic level of mastery of the program material, in which the student possesses the necessary knowledge, skills, and abilities, and is able to apply theoretical principles to solve typical practical problems.

A grade “fail” is given to a student who lacks a significant understanding of the curriculum material, makes significant errors in their answers, or fails all required assignments. These students are generally unable to continue their studies without additional classes.

8. ACADEMIC COURSE EDUCATIONAL, METHODOLOGICAL AND INFORMATIONAL SUPPORT

CORE READING:

1. ЭИ С81 Стоматология : учебник, Афанасьев В.В., Москва: ГЭОТАР-Медиа, 2023

2. ЭИ Ч-38 Челюстно-лицевая хирургия : национальное руководство : практическое руководство, , Москва: ГЭОТАР-Медиа, 2023

FURTHER READING:

1. ЭИ D25 Essentials of Operative Dentistry : учебное пособие, Daurova F.Yu., Makeeva M.K., Khabadze Z.S., Москва: ГЭОТАР-Медиа, 2019

2. ЭИ P90 Preclinical course of dentistry. Part I. Introduction to dentistry : учебное пособие, , Москва: ГЭОТАР-Медиа, 2024

3. ЭИ А 17 Абсцессы и флегмоны челюстно-лицевой области и шеи. Атлас : учебное пособие : , Ургуналиев Б.К., Янушевич О.О., Афанасьев В.В., Москва: ГЭОТАР-Медиа, 2022

4. ЭИ Б 48 Английский язык. English in Dentistry : , Берзегова Л.Ю., Москва: ГЭОТАР-Медиа, 2022

5. ЭИ Б 67 Неотложная помощь в стоматологии : , Михайлов В.В., Васильев А.В., Бичун А.Б., Moscow: ГЭОТАР-Медиа, 2012

6. ЭИ О-60 Оперативная челюстно-лицевая хирургия и стоматология : учебное пособие, , Москва: ГЭОТАР-Медиа, 2019

7. ЭИ А 94 Стоматология. Тесты и ситуационные задачи : , Афанасьев В.В., Москва: ГЭОТАР-Медиа, 2023

8. ЭИ Ч-38 Челюстно-лицевая хирургия : учебник, Дробышев А.Ю., Янушевич О.О., Москва: ГЭОТАР-Медиа, 2021

9. ЭИ Э 41 Экстренная помощь при неотложных состояниях в стоматологии : практическое руководство, , Москва: ГЭОТАР-Медиа, 2017

SOFTWARE:

No special softwares is required

LMS AND ONLINE RESOURCES

https://online.mephi.ru/

http://library.mephi.ru/

9. LOGISTICAL SUPPORT

1. Персональный компьютер: Процессор CPU Intel Core i7-8700 (3.2GHz/12MB/6 cores) Материнская плата Gig (Клиническая база)

2. Мышь, клавиатура (Клиническая база)

3. Проектор SMART P109 (Клиническая база)

4. Монитор (Клиническая база)

5. Медицинское оборудование для практической подготовки обучающихся, предусмотренное договором (Клиническая база)

6. Иное оснащение, предусмотренное порядками оказания медицинской помощи по соответствующему профилю (Клиническая база)

10. EDUCATIONAL AND METHODOLOGICAL RECOMMENDATIONS FOR STUDENTS

Recommendations for preparing for seminars.

The plan for practical classes, their topics, recommended readings, and the purpose and objectives of the course are communicated by the instructor during introductory classes or in the curriculum for the given course. Practical classes help students gain a deeper understanding of the course material and acquire skills in creative work with scientific literature.

Before you begin studying the topic, you need to familiarize yourself with the main questions of the practical lesson plan and the list of recommended literature.

When preparing for a practical lesson, you should first review lecture notes, textbook sections, and teaching aids to gain a general understanding of the topic's place and significance in the course being studied. Then, consult additional literature and take notes on the recommended sources.

In the process of studying the recommended material, it is necessary to understand the structure of the topic being studied, identify the main points, follow their logic and thereby delve into the essence of the problem being studied.

It is necessary to keep records of the material being studied in the form of notes, which, along with visual memory, also includes motor memory and allows for the accumulation of an individual fund of auxiliary materials for the rapid repetition of what has been read, for the mobilization of accumulated knowledge.

Basic note-taking forms: outline (simple and detailed), excerpts, and abstracts. During preparation, it is important to compare sources, consider the material being studied, develop an action plan, and carefully consider your oral presentation.

Recommendations for preparing for the test.

Test – 10-15-20-25 points. Each question – 1 (2) point.

TOPICS: Specified in each specific section

Answer requirements: A clear, detailed answer (2 points/question) or a choice of the correct answer to the test question (1 point/question).

Recommendations for preparing for a test/exam

Response requirements and evaluation criteria:

An "excellent" grade of 45-50 points on a test/exam is awarded for: a correct, complete, and logically constructed answer; the ability to use specialized terminology; the ability to illustrate theoretical principles with practical material.

A "good" grade of 35–44 points on the exam is awarded for: a correct, complete, and logically constructed answer with minor errors or inaccuracies; the ability to use specialized terminology, but incomplete conclusions or generalizations are made.

A “satisfactory” grade of 30–34 points on the exam is given for: a schematic, incomplete answer; inability to use special terms or ignorance of them; with one serious error;

An "unsatisfactory" grade of <30 points on the exam is given for: answering all questions on the ticket with serious errors; inability to use specialized terminology; inability to give examples of the practical use of scientific knowledge.

Admission to the exam in a discipline is granted based on a score of over 30 points.

A student can earn between 30 and 50 points per semester.

The minimum score for an exam answer is 30, the maximum is 50.

11. EDUCATIONAL AND METHODOLOGICAL RECOMMENDATIONS FOR TEACHERS

A key stage of the practical lesson is students' independent work on mastering practical skills: in simulated conditions, at the patient's bedside, in the functional diagnostics room, etc. Depending on the specific lesson topic, the student independently (or under the instructor's supervision) interviews the patient, conducts a clinical examination, observes instrumental diagnostics, and studies the results of additional tests, summarizes the data, presents it as fragments of the patient's medical history, and reports the results to the instructor. Each student's progress is assessed individually, based on the degree of development of practical skills and their theoretical foundations.

Clinical case studies are conducted for the entire group or through students' participation in clinical case studies and periodic scientific and practical conferences at the medical organizations where the practical training takes place. During these case studies, the instructor evaluates each student's active participation and clinical reasoning skills.

Situational problems proposed by the instructor are solved, which develop clinical reasoning and force the student to apply knowledge acquired in various specialty subjects. Grading and criteria for tests, extended quizzes, homework, and the final test:

1) - Tests are graded according to the following scale: 1 point for every 1 correct answer. A student who has not started the work receives -1 point.

2) - Extended quizzes are graded according to the following scale: complete answer -2 points, incomplete answer -1 point, no answer -0 points, and a student who has not started the work receives -2 points.

3) - Homework must be completed by all students to be eligible for the final assessment. Late submissions will result in a -1 point deduction from the final score.

4) - Presentation report grading criteria. Recalculation from a 100-point to a 10 (5)-point system.

5) - Essay grading criteria. Maximum 10 points. Possibly upgraded to a 5-point system.

10 points are awarded if all abstract writing requirements are met: the problem is identified and its relevance justified, a brief analysis of the issue is provided and a logical position is presented, conclusions are formulated, the article is fully analyzed, the length is maintained, and formatting requirements are met.

9 points are awarded if the following abstract writing requirements are met: the problem is identified and its relevance justified, a brief analysis of the issue is provided and a logical position is presented, conclusions are formulated, the article is fully analyzed, but the length and formatting requirements are not met.

8 points – the basic abstract requirements are met, but some shortcomings are present. Specifically, there are inaccuracies in the presentation of the material; there is a lack of logical consistency in the judgments; the abstract is not within the specified length; and there are omissions in the formatting. 7 points – the basic abstract requirements are met, but the following shortcomings are present: there are inaccuracies in the presentation of the material; there is no logical consistency in the judgments; conclusions are not formulated, the abstract is not within the scope of the abstract; there are omissions in the formatting.

6 points – there are significant deviations from the abstracting requirements; the topic is only partially covered; there are factual errors in the abstract content, conclusions and a personal point of view on the problem are missing.

5 points – there are significant deviations from the abstract requirements: the topic is only partially covered; there are factual errors in the presentation of materials and methods, conclusions and a personal point of view on the problem are missing, the format is not maintained.

4 points – there are significant deviations from the abstract requirements: the relevance of the topic is not disclosed; Factual errors were made in the presentation of materials and methods, conclusions and personal perspective on the problem are missing, and the format is not followed.

3 points – there is no analysis of the relevance of the research topic, approaches, and methods used, although the formal length of the abstract is met.

2 points – the abstract topic is not covered, revealing a significant misunderstanding of the problem. However, the abstract length and formal requirements are met.

1 point – the abstract topic is not covered, revealing a significant misunderstanding of the problem.

0 points – the student did not submit an abstract.

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