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MINISTRY OF EDUCATION AND SCIENCE OF RUSSIA

**Federal State Budgetary Educational Institution
of higher education**

**«I.N. Ulianov Chuvash State University»
(FSBEI of HE «I.N. Ulianov Chuvash State University»)**

Medical Faculty

Department of Internal Diseases

«APPROVE»

Vice-rector for Academic Affairs


I.E. Poverinov

« 13 » 04 2022

**Working programs of the discipline (module)
«Иммунология полости рта / Immunology of the Oral Cavity»**

Direction of training / specialty 31.05.03 Стоматология / Dentistry
Graduate's qualification Врач-стоматолог / Dental Practitioner

Direction (profile) / specialization «Dentistry»

Form of training – очная / intramural

Course – 3

Term – 5

Total academic hours/credit points – 72/2

The year of beginning the training – 2022

The fundamental document for compiling the working program of the discipline (module)
Федеральный государственный образовательный стандарт высшего образования –
специалитет по специальности 31.05.03 Стоматология (приказ Минобрнауки России от
12.08.2020 г. № 984)

Approved by:

associate professor, Candidate of Medical Sciences S.I. Kudryashov

The working program was approved at the meeting of the Department of Internal
Diseases, 25.03.2022, protocol № 12

Head of the department L. M. Karzakova

Approved by

Dean of the Medical Faculty V.N. Diomidova

Acting Head of the Educational and Methodological Department E.A. Shirmanova

1. The purpose and objectives of training in the discipline (module)

The purpose of the discipline - familiarization of students in the specialty 31.05.03. "Dentistry" with the theoretical foundations and patterns of interaction of micro- and macroorganism, the formation of students' practical skills in the methods of prophylaxis, immunodiagnostics, treatment of immunodeficiency, allergic, autoimmune human diseases manifested in the oral cavity and maxillofacial region.

The objectives of the discipline - - to study the structure of the immune system, its age-related features, mechanisms of development and functioning;

- to study the causes of development, pathogenesis of immune disorders and clinical manifestations of major immunodeficiency, allergic, autoimmune and other diseases of the immune system;

- to study the main methods of assessing the immune status;

- to form methodological foundations for the development of tactics for the treatment and prevention of diseases of the immune system manifested in the oral cavity.

2. The place of practical training in the structure of the educational program of higher education

The discipline «Иммунология полости рта / Immunology of the Oral Cavity» относится к части учебного плана формируемой участниками образовательных отношений refers to the mandatory part in the curriculum of the educational program of higher education (hereinafter referred to as the EP of HE) in the field of training / specialty 31.05.03 Стоматология, direction (profile) / specialization of the program «Dentistry».

Previous academic disciplines (modules) and (or) practices that form the knowledge, skills and abilities necessary for training in the discipline (module):

Валеология / Valeology

Knowledge, skills and abilities formed as a result of training in a discipline (module) are necessary when teaching in the following disciplines (modules) and (or) practices:

Производственная практика (практика по получению профессиональных умений и опыта профессиональной деятельности (по профилактической стоматологии)) / On- the-job training (practical training in obtaining professional skills and professional experience (in surgical dentistry))

Производственная практика (практика по получению профессиональных умений и опыта профессиональной деятельности (по ортопедической стоматологии)) / On-the- job training (practical training in obtaining professional skills and professional experience (in orthopedic dentistry))

Производственная практика (практика по получению профессиональных умений и опыта профессиональной деятельности (по терапевтической стоматологии)) / On-the- job training (practical training in obtaining professional skills and professional experience (in therapeutic dentistry))

Фтизиатрия / Phthisiology

Инфекционные болезни, эпидемиология / Infectious Diseases, Epidemiology

3. Planned learning outcomes in the discipline (module), correlated with the planned learning outcomes

Planned learning outcomes in the discipline (module), correlated with the planned learning outcomes

Code and name of the competence	Code and name of the competence achievement	Descriptors for the indicator of competence achievement (learning)
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<p>ПК-4 Способен провести и контролировать эффективность санитарно-эпидемических и иных профилактических мероприятий по охране здоровья населения / He/she is able to conduct and monitor the effectiveness of sanitary-epidemic and other preventive measures to protect public health</p>	<p>ПК-4.1 Способен разработать план санитарно-эпидемических и профилактических мероприятий по охране здоровья населения / He/she is able to develop a plan of sanitary-epidemiological and preventive measures to protect public health</p>	
<p>ПК-4 Способен провести и контролировать эффективность санитарно-эпидемических и иных профилактических мероприятий по охране здоровья населения / He/she is able to conduct and monitor the effectiveness of sanitary-epidemic and other preventive measures to protect public health</p>	<p>ПК-4.2 Способен провести и контролировать эффективность разработанных санитарно-эпидемических и профилактических мероприятий по охране здоровья населения / He/she is able to carry out and monitor the effectiveness of developed sanitary-epidemiological and preventive measures to protect public health</p>	

4. Structure, scope and content of the discipline (module)

Educational activities in the discipline (module) are carried out:

- in the form of students' face-to-face work with the teaching staff of the organization and (or) persons involved by the organization to implement the educational programs on other terms (hereinafter - contact work);

- in the form of students' independent work.

Face-to-face work can be classroom-based, extramural, as well as it can be conducted in an electronic information and educational environment (EIEE).

Learning sessions in the discipline (module) and interim assessment of students are conducted in the form of face-to-face work and in the form of students' independent work.

During learning sessions in the discipline (module) face-to-face work includes: lecture-type classes, seminar-type classes and (or) group consultations, and (or) individual work of students with the teaching staff of the organization and (or) persons involved by the organization to implement the educational programs on other terms (including individual consultations).

Legend:

Lec – lectures, Lab – laboratory work, Pr – practical classes, ICW – individual face-to-face work, IW – independent work.

4.1. Content of the discipline (module)

Section name	The section's content	Formed competences	Competence achievement indicator
General immunology of the oral cavity	Topic 1. Local immunity of the oral mucosa. Colonization resistance		
	Topic 2. Clinical and laboratory methods for the study of cellular and humoral immune response.		
Clinical immunology of the oral cavity	Topic 3. Congenital immunodeficiency. Dental manifestations of congenital immunodeficiency.		
	Topic 4. Secondary immunodeficiency. Opportunistic infections of the oral cavity		
	Topic 5. Autoimmune processes, features of clinical manifestations and diagnostics in dental practice		
	Topic 6. Principles of immunotherapy and immunorehabilitation. Immunocorrection in dentistry.		
Oral allergology	Topic 7. Types of allergic reactions. Allergic diseases. The concept of pseudoallergic reactions, the mechanisms of their development.		
	Topic 8. Allergic diseases in dental practice		

4.2. Scope of the discipline and types of academic work

Forms of control and types of academic work	Labor intensity of the discipline (module)	
	5	total
1. Face-to-face work:	32,2	32,2
In-class learning in total, including:	32	32
Лабораторные занятия (Лаб)	32	32

Индивидуальная контактная работа (ИКР)	0,2	0,2	
2. Independent work of the student:	39,8	39,8	
3. Intermediate certification (exam) (зачет)	3a	3a	
Total:	academic hours	72	72
	credit units	2	2

№ item	The section's (theme's) name	Face-to face work, including in the electronic information and educational environment, academic hours				IW, academic hours	Total, academic hours
		Lect.	Pr.	Lab.	ICW		
	General immunology of the oral cavity						
1	Topic 1. Local immunity of the oral mucosa. Colonization resistance			4		5	9
2	Topic 2. Clinical and laboratory methods for the study of cellular and humoral immune response.			4		5	9
	Clinical immunology of the oral cavity						
3	Topic 3. Congenital immunodeficiency. Dental manifestations of congenital immunodeficiency.			4		5	9
4	Topic 4. Secondary immunodeficiency. Opportunistic infections of the oral cavity			4		5	9
5	Topic 5. Autoimmune processes, features of clinical manifestations and diagnostics in dental practice			4		5	9
6	Topic 6. Principles of immunotherapy and immunorehabilitation. Immunocorrection in dentistry.			4		5	9
	Oral allergology						

7	Topic 7. Types of allergic reactions. Allergic diseases. The concept of pseudoallergic reactions, the mechanisms of their development.			4		5	9
8	Topic 8. Allergic diseases in dental practice			4	0,2	4,8	9
Total academic hours				32	0,2	39,8	72

4.3. Summary of the discipline (module), structured by sections (topics)

Раздел 1. General immunology of the oral cavity

Тема 1. Topic 1. Local immunity of the oral mucosa. Colonization resistance

Лабораторное занятие. Laboratory lesson 1. Features of immune protection of oral mucosa, connection with systemic immunity.

Тема 2. Topic 2. Clinical and laboratory methods for the study of cellular and humoral immune response.

Лабораторное занятие. Laboratory lesson 2. Principles of assessing the functioning of the human immune system. Clinical and anamnestic method of assessing the immune status of a person.

Раздел 2. Clinical immunology of the oral cavity

Тема 3. Topic 3. Congenital immunodeficiency. Dental manifestations of congenital immunodeficiency.

Лабораторное занятие. Laboratory lesson 3. Diagnosis and clinic of primary immunodeficiency diseases.

Тема 4. Topic 4. Secondary immunodeficiency. Opportunistic infections of the oral cavity

Лабораторное занятие. Laboratory lesson 4. Secondary immunodeficiency states.

Тема 5. Topic 5. Autoimmune processes, features of clinical manifestations and diagnostics in dental practice

Лабораторное занятие. Laboratory lesson 5. The most common autoimmune diseases in clinical practice.

Тема 6. Topic 6. Principles of immunotherapy and immunorehabilitation. Immunocorrection in dentistry.

Лабораторное занятие. Laboratory lesson 6. Immunotropic drugs

Раздел 3. Oral allergology

Тема 7. Topic 7. Types of allergic reactions. Allergic diseases. The concept of pseudoallergic reactions, the mechanisms of their development.

Лабораторное занятие. Laboratory lesson 7. Mechanisms of development of true allergy and pseudoallergic reactions.

Тема 8. Topic 8. Allergic diseases in dental practice

Лабораторное занятие. Laboratory lesson 8. The most common allergic diseases in dental practice.

5. Educational technologies

To implement the competence-based approach in the study of the discipline (module), extensive use of active and interactive methods of conducting classes in the educational process is provided:

6. Forms of control and types of evaluation materials for the discipline (module)

Intermediate attestation - evaluation of intermediate and final results of training in the discipline (module).

6.1. Sample list of questions for the credit test

1. Immunogram for common variable immune deficiency (CVID).
2. Immunogram for selective IgA deficiency
3. Immunogram for secondary insufficiency of the T-cell immune response
4. Immunogram for secondary insufficiency of humoral immune response
5. Immunogram in violation of phagocytosis
6. Immunogram for the reagin type of allergic diseases
7. Immunogram for the cellular type of allergic diseases
8. Dental manifestations of humoral immunodeficiency
9. Dental manifestations of cellular immunodeficiency
10. Clinical criteria for the diagnosis of primary immunodeficiency.
11. OVIN: diagnosis, treatment
12. Selective IgA deficiency: diagnosis, treatment
13. Causes of secondary insufficiency of the T-cell immune response
14. Causes of secondary insufficiency of the humoral immune response
15. Functions of the T-cell immune response
16. Functions of the humoral immune response
17. Factors of adaptive immunity
18. Factors of innate immunity
19. Immunosuppressants
20. Substitution therapy for humoral immunodeficiency
21. Antiviral drugs
22. Treatment of herpes infection of the oral cavity
23. Local immunity in the oral cavity. Colonization resistance
24. Immunomodulators in the treatment of infectious and inflammatory diseases of the oral cavity
25. Principles of immunorehabilitation of oral diseases
26. Anaphylactic shock. The mechanism of development. Diagnostics. Treatment
27. Immunogram indicators characterizing the humoral link of immunity
28. Immunogram indicators characterizing the cellular link of immunity

29. Immunogram indicators characterizing the phagocytic link of immunity
30. Principles of treatment of allergic diseases.
31. Laboratory and clinical criteria for the establishment of AIDS.
32. Clinical manifestations in the oral cavity in HIV infection.

6.2. Sample list of questions for the examination

Not provided

6.3. Suggested themes of term papers (projects)

Not provided

6.4. Suggested themes of term projects

Not provided

6.5. Suggested topics of calculation and graphic works

Not provided

7. Educational, methodological, informational and software support of the discipline (module)

The electronic catalog and electronic information resources provided by the scientific library of the FSBEI of HE "I. N. Ulianov Chuvash State University" are available at the link <http://library.chuvsu.ru/>

7.1. Regulatory documents, standards and rules

1. Professional standard "Allergologist-immunologist" (approved by the order of the Ministry of Labor and Social Protection of the Russian Federation dated March 14, 2018 138n).

2. Federal State Educational Standard in the specialty 31.08.26 Allergology and Immunology (the level of training of highly qualified personnel)

(approved by the order of the Ministry of Education and Science of the Russian Federation dated August 25, 2014 N 1068)

3. Order of the Ministry of Health of the Russian Federation dated 07.11.2012 N 606n "On approval of the Procedure for providing medical care to the population in the profile "Allergology and immunology".

4. Order of the Ministry of Health and Social Development of the Russian Federation of October 9, 2009 N 819n "On approval of the Procedure for providing medical care by organ transplantation".

5. Order of the Ministry of Health and Social Development of the Russian Federation of April 16, 2010 N 243n "On the organization of specialized medical care".

6. Order of the Ministry of Health and Social Development of the Russian Federation dated February 4, 2010 N 60n "On approval of the procedure for providing medical care to patients with allergic diseases and diseases associated with immunodeficiency".

7. The Code of Professional Ethics of a doctor of the Russian Federation. Adopted by the First National Congress of Doctors of the Russian Federation (Moscow, October 5, 2012).

7.2. Recommended basic educational and methodological literature

№ item	Name
1	Хайтов Р. М., Ильина Н. И. Аллергология и клиническая иммунология [Электронный ресурс]: монография. - Москва: ГЭОТАР-Медиа, 2019. - 336 с. – Режим доступа: https://www.studentlibrary.ru/book/ISBN9785970450109.html

7.3. Recommended supplementary educational and methodological literature

№ item	Name
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1	[Бондарева Г. П. и др.] ; гл. ред. Р. М. Хаитов, Н. И. Ильина Аллергология и иммунология [Электронный ресурс]:практическое руководство. - Москва: ГЭОТАР-Медиа, 2014. - 656 с. – Режим доступа: https://www.studentlibrary.ru/book/ISBN9785970428306.html
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7.4. List of resources of the "Internet" information and telecommunication network

№ item	Name	Link to the resource
1		

7.5. Software, professional databases, information and reference systems, electronic educational resources and electronic library systems

Software, professional databases, information and reference systems provided by the Informatization Department of the FSBEI of HE "I.N. Ulianov Chuvash State University" are available for download at the link <http://ui.chvsu.ru/>. The Unified Register of Russian programs for electronic computers and databases, including freely distributed ones, is available at the link reestr.minsvyaz.ru/reestr/.

7.5.1. Licensed and freely distributed software

Microsoft Windows operating System and/or Unix-like operating system and/or mobile operating system;

Office software packages:

Microsoft Office and/or LibreOffice
and (or) OpenOffice and (or) analogues;

Browsers, including Yandex.Browser.

List of software:

7.5.2. Lists of professional databases and (or) information reference systems and (or) electronic library systems and (or) electronic educational resources

8. Material and technical support of the discipline

Classrooms for lecture-type classes in the discipline are equipped with a teacher's automated workplace consisting of: a personal computer/laptop, multimedia equipment with a screen and (or) SMART interactive whiteboard/SMART TV.

The premises for students' independent work are equipped with computer equipment enabling to connect to the Internet and provide access to the electronic information and educational environment of the FSBEI of HE "I.N. Ulianov Chuvash State University".

№ item	Lesson type	Brief description and characteristics of the composition of installations, measuring and diagnostic equipment, computer equipment and experimental automation tools

1	Зачёт	Учебная аудитория для проведения занятий лекционного и семинарского типа, текущего контроля и промежуточной аттестации. Учебная мебель. Оборудование: учебная доска Стационарное и/или переносное мультимедийное оборудование.
2	ИКР	Учебная аудитория для проведения групповых и индивидуальных консультаций. Учебная мебель. Оборудование: учебная доска. Стационарное и/или переносное мультимедийное оборудование.
3	Лаб	Учебная аудитория для проведения занятий лекционного и семинарского типа, текущего контроля и промежуточной аттестации. Учебная мебель. Оборудование: учебная доска Стационарное и/или переносное мультимедийное оборудование.
4	Ср	Помещение для самостоятельной работы обучающихся. Оборудование: компьютерная техника с подключением к сети Интернет и доступом к электронной информационно-образовательной среде ФГБОУ ВО «Чувашский государственный университет имени И.Н. Ульянова»

9. Means of adapting the discipline teaching to the needs of persons with physical conditions

If necessary, persons with physical conditions can be offered one of the following options for perceiving information, taking into account their individual psychophysical characteristics:

- 1) using e-learning and distance learning technologies.
- 2) using special equipment (enginery) and software in accordance with the students' health restrictions in the Training Centers for Persons with Disabilities and Physical Conditions (hereinafter referred to as special needs) available at the university.

In the course of training, if necessary, the following conditions are provided for persons with visual, hearing and musculoskeletal disorders:

- for persons with visual impairments: educational and methodological materials in printed form in enlarged font; in the form of an electronic document; in the form of an audio file (conversion of educational materials into audio format); in printed form in Braille; individual consultations involving a tactile interpreter; individual assignments and consultations.

- for people with hearing impairments: educational and methodological materials in printed form; in the form of an electronic document; video materials with subtitles; individual consultations involving a sign language interpreter; individual assignments and consultations.

- for persons with disorders of the musculoskeletal system: educational and methodological materials in printed form; in the form of an electronic document; in the form of an audio file; individual assignments and consultations.

10. Guidelines for students to perform independent work

The purpose of the student's independent work (IW) is to consolidate the theoretical knowledge gained and to acquire practical skills in using and performing research of

algorithms and data structures when designing application software programs. IW includes independent study of educational issues, preparation for laboratory classes, performing calculation and graphic work, preparation for a test and an exam.

The list of questions and tasks for independent work to prepare for laboratory classes is given in the corresponding methodological instructive regulations in the description of each laboratory work.

The list of questions and tasks for independent work to carry out calculation and graphic work is given in the relevant methodological instructive regulations.

Independent work of students is an integral part of the educational process. The purpose of independent work is to prepare a modern competent specialist and to form abilities and skills for continuous self-education and professional improvement.

The implementation of this goal involves solving the following tasks:

- qualitative development of theoretical material in the discipline under study, deepening and expanding theoretical knowledge in order to apply them at the level of interdisciplinary connections;

- systematization and consolidation of the acquired theoretical knowledge and practical skills;

- formation of skills in the search and use of normative, legal, reference and special literature, as well as other sources of information;

- development of cognitive abilities and activity, creative initiative, independence, responsibility and organization;

- formation of independent thinking, abilities for self-development, self-education, self-improvement and self-realization;

- development of research skills;

- formation of the ability to solve practical problems (in professional activity) using acquired knowledge, abilities and skills.

Independent work of students in allergology and immunology includes extracurricular independent work on the study of basic and additional educational literature, the use of modern information technologies to search for information on newly introduced technologies in allergology and immunology, classroom independent supervision of patients with allerge- and immunopathology. This work is carried out under the supervision of a teacher during practical and laboratory classes. For compulsory extracurricular independent work in the work program, additional study hours are allocated for sections of the discipline.

11. Methodological instructive regulations for students studying the discipline (module)

The discipline "Oral Immunology" allows students to instill the skills necessary in the activities of a dentist for immunodiagnostics and the use of immunotropic therapy, assessment of immune status. Therefore, students should rely mainly on the knowledge and skills acquired during lectures and practical classes. This provides the necessary basis for further in-depth study of other disciplines. However, this knowledge needs to be activated. For independent preparation for laboratory classes, study of educational issues, preparation for the test, the following sources can be recommended:

- lecture notes and materials of laboratory classes;
- educational literature of the relevant profile.

At the beginning of the course, the teacher informs students about the forms, types and content of independent work, explains the requirements for the results of independent work, as well as forms and methods of control and evaluation criteria.

11.1. Methodological instructive regulations for preparing for seminar-type classes

Not provided

11.2. Methodological instructive regulations for preparing for an examination

Not provided

11.3. Methodological instructive regulations for preparing for a test

Preparation of students for passing the test includes:

- viewing the program of the training course;
- identification of the sources necessary for the preparation (textbooks, additional literature, etc.) and their study;
- use of lecture notes, materials of laboratory classes;
- consulting with a teacher.

Preparation for the test begins with the first lesson in the discipline, where students receive a general teacher's attitude and a list of basic requirements for current and final reporting. At the same time, it is important to systematically master the material from the very beginning, guided, first of all, by the list of questions for the test, to take notes of sources important for solving educational tasks. During the semester, the replenishment, systematization and adjustment of student developments, the development of new and consolidation of already studied material take place.

11.4. Methodological instructive regulations for performing computational and graphical

Not provided

11.5. Methodological instructive regulations for performing a control work

Not provided

11.6. Methodological instructive regulations for performing a course work (project)

Not provided

List of additions and changes

The name and details (if any) of the document attached to the Working Program of the discipline (module) containing the text of updates	Department's decision		Full name of department head:
	Date	Protocol №	