



CD8.5.1DISCIPLINE CURRICULUM

Edition: 06

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FACULTY OF DENTISTRY

STUDY PROGRAM 0911.1 DENTISTRY

DEPARTMENT / CHAIR OF GENERAL HYGIENE

APPROVED

at the meeting of the Commission for Quality Assurance and Evaluation of the Curriculum

faculty of DENTISTRY

Minutes No. 2 of 13.02.2018

Chairman Doctor of Medical Sciences

Stepco Elena [Signature]

APPROVED

at the Council meeting of the Faculty of

DENTISTRY

Minutes No. 6 of 20.02.2018

Dean of Faculty PhD./Univ. Prof.,

Ciobanu Sergiu [Signature]



APPROVED

approved at the meeting of the chair General Hygiene

Minutes No. ____ of ____

Head of chair PhD., Univ. Prof.,

Ion Bahnarel [Signature]

SYLLABUS

DISCIPLIN GENERAL HYGIENE

Integrated studies

Type of course: **Compulsory**

Chisinau, 2018



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I. INTRODUCTION

- General presentation of the discipline: place and role of the discipline in the formation of the specific competences of the professional / specialty training program

Hygiene plays an important role in the preparation of curative and preventive discipline. It aims to give to the students knowledge on maintaining human health, disease prevention of infectious and non-infectious diseases, prolonging life. For successful implementation of preventive activity every dentist should have knowledge on: impact of ambient environment factors on health; the measures of improving the environment, prevention of diseases, health maintenance. Knowing the character of the usual environment on the body, the doctor will assess correctly the causes of illness, complications, prevention measures will apply effective treatment will solve the problems of work capacity and placement in the labour market.

Mission of the curriculum (aim) in professional training

The study of environmental factors, ways of public health protection, prophylaxis of infectious and non-infectious diseases and extending the quality and length of human life.

- Language (s) of the course: Romanian, Russian, English.
- Beneficiaries: students of the II year, faculty of dentistry.

II. MANAGEMENT OF THE DISCIPLINE

Code of discipline		F.04.O.045	
Name of the discipline		General Hygiene	
Person(s) in charge of the discipline		PhD., Univ. Prof., Ion Bahnarel; Assis. Prof., Natalia Bivol.	
Year	II	Semester/Semesters	IV
Total number of hours, including:			60
Lectures	17	Practical/laboratory hours	17
Seminars	17	Self-training	9
Clinical internship			
Form of	DC	Number of credits	2



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assessment

III. TRAINING AIMS WITHIN THE DISCIPLINE

At the end of the discipline study the student will be able to:

- to know the basic notions about hygiene as a science, sanitation, prevention;
- to study environmental factors and understand their impact on the health of the human body;
- to make acquaintance with the research methodology in the field of the impact of the environmental factors to the health of human body;
- become acquainted with the methods of assessing and processing of special literature, developing of reports and presentations on the basis of the work carried out.

at the application level:

- to carry out laboratory work using appropriate methods and tools;
- to solve case studies & exercises;
- to be able to compile records, reports, presentations on the basis of the work carried out;
- to apply in practice the knowledge gained in daily work;
- to be able to argue their own opinion and assess various information in studying of human health.

at the integration level:

- to appreciate the importance of hygiene in the context of Medicine;
- to possess the abilities to organize prevention, to provide information about ways of maintaining health;
- to assess the impact of environmental factors on patients' health;
- to be able to assess the importance of hygienic measures in the medicine and in the public health institutions and organised staffs (institutions, organizations, etc.).

IV. PRELIMINAR CONDITIONS AND REQUIREMENTS

Student of the second year requires the following:

- knowing of the teaching language;
- confirmed competences in science knowledge at lyceum level (biology, chemistry, physics);
- confirmed competences in science knowledge at university level (physiology, microbiology, biochemistry, physiopathology, therapy, surgery, endocrinology, infectious diseases etc.);
- digital competences (use of the Internet, document processing, electronic tables and presentations, use of graphics programs);
- ability in communication and team work;
- qualities - tolerance, compassion, autonomy.



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V. THEMES AND ESTIMATE ALLOCATION OF HOURS

Lectures:

Nr	Topics	Nr. of hours
1.	The subject of hygiene, tasks, investigation methods. The hygiene importance for stomatologist.	1
2.	Water's hygiene and the supply of the population with water. The importance of mineral substances of water for the tissue of teeth. Problem of the fluorine: caries and fluorosis.	2
3.	The notion of feeding. The speeding of energy by the human organism and the energetic value of the diet.	2
4.	Biological importance of the nutritive substances and the sources of these substances. The nutritional pathologies and their prophylaxis.	2
5.	Food intoxication and their prophylaxis. The organization and hygienic supervision over feeding in special conditions.	2
6.	Hygiene of the air. The hygienic importance of physical and chemical factors of the air.	2
7.	Labour's hygiene and physiology.	2
8.	Work hygiene of dental practitioners.	2
9.	Hygiene of dental clinic.	2
To tal		17

practical hours

No. d/o	THEME	Number of hours		
		Lectures	Practical hours	Self-training
1.	Methods which are applied in hygiene	1	1	1
2.	Hygienic appreciation of drinking water's quality.	1	1	1
3.	The method of water conditioning.	1	1	1
4.	Hygienic evaluation of actual individual feeding.	1	1	1
5.	Determination of the organism's requirements in energy..	-	1	-
6.	Calculation of the chemical composition and energetic value of the diet	-	1	1
7.	Hygienic assessment of vitamin value of some food-stuffs. Determination of the contents of vitamin C in food-stuffs. Examination of the vitamin security of the organism.	1	1	1
8	Hygienic examination of quality of some food-stuffs.	1	1	1
9	Food poisoning and their prophylaxis.	-	1	-
10	Hygienic evaluation of the microclimate of different rooms, of the dental surgery inclusive and their impact on the human health.	1	1	1
11	Air pollution of the environment at the working place of dentist with	1	1	-



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No. d/o	THEME	Number of hours		
		Lectures	Practical hours	Self- training
	chemical substances and dust. Determination of the chemical substances in air by means of express- methods.			
12	Hygienic evaluation of the ventilation and heating systems for different rooms.	-	1	-
13	Hygienic evaluation of the natural and artificial illumination in different rooms.	-	1	-
14	Physical and intellectual work. Functional modifications in the organism during the work.	1	1	1
15	Ionizing radiation and its impact on health. Radioprotection in dentistry.	2	1	-
16	Hygienic appreciation and systematization of dental clinics.	2	1	-
17	Colloquy.	2	1	
Total		17	17	9

VI. REFERENCE OBJECTIVES AND CONTENT UNITS

Objectives	Content unit
Theme (chapter) 1. Intorduction in Hygiene. Nutrition hygiene (First part)	
<ul style="list-style-type: none"> to define the basic concepts of general hygiene. to know the methods of research on the environment and its action on health. to know the apparatus and devices used in hygienic studies. to apply the methods of research in the field of hygiene. to integrate knowledge about promoting healthy lifestyles into everyday life. to define the components of human energy consumption. to know the methods for determining the energy consumption. 	<ul style="list-style-type: none"> Fundamental concepts of general hygiene. Methods of research into the environment and its action on health. Apparatus and devices used in hygienic studies. Methods of doing research on hygiene. Knowledge about promoting healthy lifestyles. Parts of energy consumption in humans. Methods of determining energy consumption.
Theme (chapter) 2. Nutrition hygiene (Second part)	
<ul style="list-style-type: none"> to apply the principles of rational nutrition. hygienic requirements to it. to demonstrate the principles of rational nutrition. hygienic requirements to it. to demonstrate the importance of nutrition quality in the prevention of diseases. 	<ul style="list-style-type: none"> Principles of rational nutrition. hygienic requirements to it. Principles of rational nutrition. hygienic requirements to it. Importance of nutritional quality in the prevention of diseases.



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|---|---|
| <ul style="list-style-type: none"> • to know the importance of vitamins, minerals in nutrition and determination of vitamin C in food products. • to integrate into daily life the knowledge about the importance of proper nutrition balance in nutrition. • to know the physiology and biochemistry of digestion. • to define the classification of food pathologies, food intoxications and food intoxication. | <ul style="list-style-type: none"> - Knowledge of the importance of the proper balance of nutrients in the diet. - Methods of determination of vitamin C in different food products. - Methods of determination of body supply with vitamin C. - Investigation of cases of food intoxications and taking appropriate measures of prophylaxis. - Foodborne disease and its prophylaxis. |
|---|---|

Theme (chapter) 3. Environmental hygiene

- | | |
|---|---|
| <ul style="list-style-type: none"> • to define microclimate, time and climate in hygienic vision. • to define - air temperature, humidity, air velocity, atmospheric pressure its importance for thermoregulation. • to apply methods and apparatus for determination. • to know the hygienic importance of the wind of winds in the construction of children's and curative-prophylactic institutions. • to apply methods of research into the influence of microclimate on the human body. • to know the complex action of microclimate factors on the body. Methods of appreciation. • to apply air sampling methods for the determination of chemicals, dust and bacteria, air volume conditioning method, laboratory-express methods to investigate air pollution with noxious chemicals. • to know the theoretical bases necessary for the sanitary control of ventilation and room heating. • to apply laboratory instrumentation and calculation methods for ventilation and room heating control. • to acquire the methods for determining the natural and artificial lighting (technical and calculation). • to take measures to improve the lighting of the rooms in question. • to acquire the physiological methods of appreciating the influence of illumination on the vision. • to take measures to prevent diseases caused by the use of non-qualitative water. • to apply the methods for determining the physical and chemical properties of water pollution | <ul style="list-style-type: none"> - Microclimate, time and climate in hygienic vision. - Temperature, air humidity, its importance for thermoregulation. - Speed of air movement, atmospheric pressure its hygienic importance. Methods and apparatus for determination. - Particularities of thermoregulation in different pathological states, normalization of microclimate in these cases. - Complex action of microclimatic factors on the body. Methods of appreciation. - The physiological and hygienic importance of the atmospheric air components. - Physical, chemical and bacteriological indications of room air pollution. - Evaluate the efficiency of ventilation and room heating. - To recommend and to advocate measures for the decontamination of air in hospital and pharmaceutical premises. - The physiological and hygienic importance of light. Hygienic requirements for lighting. - Indices that characterize the level of natural illumination: luminosity coefficient, natural illumination coefficient, incidence angle, opening angle, etc. - Indices that characterize the level of artificial illumination: direct luxmetry, light power, calculated illumination, reflection coefficient and uniformity of illumination. - Norms of natural and artificial lighting in the sanitary, children's and living rooms. - Dependence of visual analyzer's main functions on illumination conditions (visual acuity, stability of clairvoyance, visual analyzer yield). -Systematize and strengthen students' knowledge of |
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with organic substances and methods of water disinfection.

- to know and apply the methods of water quality conditioning, decanting and water filtration: the stages in the conditioning process. Coagulation water clarification; the factors that determine its efficacy, the choice of coagulant dose.

the importance of water in the spread of infectious and noninfectious diseases.

- Physiological importance of water. Influence of chemical composition of water on population health, its epidemiological significance.
- Methods of conditioning water quality. Water decanting and filtration: the stages in the conditioning process. Coagulation water clarification; the factors that determine its efficacy, the choice of coagulant dose.
- Methods of water disinfection.

• **Theme (chapter) 4. Work hygiene**

- to define what is occupational hygiene and research methods.
- to know the influence of the work process on the functional state of the body.
- to know the characteristic of the main professional noxes.
- to apply the methods of determining overloading organs and systems of the body during work.
- to know the peculiarities of powder, noise of noise, vibration, ultrasound and their action on the body.
- to know and apply the means of individual protection.

- Influence of the work process on the functional state of the organism.
- The characteristic of the main professional noxes
- Overloading body organs and systems during work.
- Dust. Classification and particle features.
- Noise, vibration, ultrasound and their action on the body.
- Personal protective equipment.

VII. SPECIFIC (SC) AND TRANSVERSAL (TC) PROFESSIONAL COMPETENCES AND STUDY FINDINGS.

Specific competences:

- Knowledge, understanding and use of specific language
- Identification and use of concepts, principles and theories of general hygiene in professional activities.
- Thorough knowledge, understanding and operation of theoretical knowledge and basic practical methods of hygiene.
- Good knowledge and practical application of the knowledge of hygiene in relation to the patient, taking into account the age and character of the person. .
- Hold professional principles of health maintenance and elucidate the causes and conditions that affect the body.
- Applying in practice research and determination methods to improve health at work.



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Transversal competences:

- Applying rigorous and efficient working rules, manifesting a responsible attitude towards the scientific and didactic field, for optimal and creative valorisation of their own potential in specific situations, observing the principles and norms of professional ethics;
- Ensure effective deployment and effective engagement in team activities.
- Identify opportunities for continuous training and efficient use of learning resources and techniques for their own development.

Study findings:

- To know the organizational features, the basic properties of general hygiene;
- To understand the principles of rational nutrition, hygienic requirements for it;
- To understand the balance of nutrients in the diet;
- To know the hygienic importance of microclimate. The complex action of microclimate factors on the body. Methods of appreciation;
- To know the particularities of thermoregulation in different pathological states. Hygienic norm in these cases;
- Understand and use in practice the methods of chlorinating disinfection and water conditioning;
- To know the particularities of the work, the functional changes during the work;
- To be able to assess the place and role of general hygiene in the practical training of the student;
- To be competent to use the knowledge and methodology of general hygiene in everyday practice;
- To be able to implement the knowledge gained in the research activity;
- To be competent to use critically and with confidence the scientific information obtained using the new information and communication technologies.



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VIII. INDIVIDUAL WORK OF THE STUDENT

Nr.	Expected product	Implementation strategies	Evaluation criterias	Deadline
1	Work with information sources	<ul style="list-style-type: none"> -carefully reading the lecture or the material in the manual on the subject. -Reading questions on the topic, which requires reflection on the subject. -getting acquainted with the list of additional information sources. -selecting the essential content. -formulating generalizations and conclusions about the importance of the subject. 	<ul style="list-style-type: none"> the ability to extract the essence. interpretive abilities the volume of work 	During the semester
2	Work with practice notebook	<ul style="list-style-type: none"> - information analysis on the lecture topic and manual. - solving consecutive tasks. - formulating the conclusions at the end of each lesson. - verifying the end of the lesson. 	<ul style="list-style-type: none"> The volume of work. Solving the case problem. ability to formulate conclusions 	During the semester
3	Applying of different learning techniques		<ul style="list-style-type: none"> The volume of work. the degree of perception of the essence. the quality of the conclusions. forming personal attitude. 	During the semester
4	Work with On-line sources	Learning on-line materials from department's site	Visit of different electronic on-line sources.	During the semester
5	Preparing of presentations	<ul style="list-style-type: none"> selecting the research theme. establishing the plan, the terms of presentation, and the components of the PowerPoint presentation. theme, purpose, results, conclusions, practical applications reviews. 	<ul style="list-style-type: none"> The volume of work. the degree of perception of the essence. the quality of the conclusions. forming personal attitude. the ability to extract the essence. ways of graphic presentation. 	During the semester



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IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-EVALUATION

- **Teaching and learning methods**

General Hygiene discipline is taught in the classic way: with theoretical lectures and practical work. The lectures will be presented by certified staff. During practical work, students will study the influence of environmental factors (natural and manmade) on the human body using specific laboratory methods on specific topics, as well by using technical equipment. The Department reserves the right to conduct a part of practical work in interactive manner as following: heuristic conversation, case-problem solving, brainstorming, group work, individual study, work with textbook and text, debate, role play, simulation, interactive listening etc.

- **Applied didactic strategies / technologies (specific to the discipline)**

Brainstorming, Brainwriting, the Round Table, Group interview, Conference, Case-problem, Focus-group technique, Multi-voting, Cube technique etc.

- **Methods of assessment (including the method of calculation of final mark)**

Current: front and / or individual control via:

- (a) the application of docimological tests,
- (b) solving problems / exercises,
- (c) analysis of case-problems
- (d) playing role-games on the discussed topics.
- (e) examination test.

Final: Colloquy.

Method of mark rounding at different assessment stages

Intermediate marks scale (annual average, marks from the examination stages)	National Assessment System	ECTSEquivalent
1,00-3,00	2	F
3,01-4,99	4	FX
5,00	5	E
5,01-5,50	5,5	
5,51-6,0	6	
6,01-6,50	6,5	D
6,51-7,00	7	
7,01-7,50	7,5	C
7,51-8,00	8	
8,01-8,50	8,5	B
8,51-8,00	9	
9,01-9,50	9,5	A
9,51-10,0	10	



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The average annual mark and the marks of all stages of final examination (computer assisted, test, oral) - are expressed in numbers according to the mark scale (according to the table), and the final mark obtained is expressed in number with two decimals, which is transferred to student's record-book.

Absence on examination without good reason is recorded as "absent" and is equivalent to 0 (zero). The student has the right to have two re-examinations.

VI. RECOMMENDED LITERATURE:

A. Compulsory:

1. Gh. Ostrofeț. L. Groza. L. Cuznețov. Hygiene (practice book). Chișinău. 2009. 240 pag.
2. Doroftei Sorina. Vlaicu Brighita. Petrescu Cristina. Putnoky Salomeia. Fira-Mladineascu Corneluța. The hygiene. Lito UMF Timișoara. 2003. 375 pag.
3. Duca Gheorghe. Scurlatov Yurii. Ecological chemistry. Chișinău. 2002. 289 pag.

B. additional:

4. Guidelines for drinking-water quality. Second edition. Volume 1. Recommendations. World Health Organization Geneva. 143 pag.
5. Joint FAO/WHO Food Standards Programme CODEX ALIMENTARIUS COMMISSION. CODEX ALIMENTARIUS (FOOD HYGIENE BASIC TEXTS). THIRD EDITION. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS WORLD HEALTH ORGANIZATION. 2003. 68 pag.
6. Joint FAO/WHO Food Standards Programme CODEX ALIMENTARIUS COMMISSION. CODEX ALIMENTARIUS (FOOD IMPORT AND EXPORT INSPECTION AND CERTIFICATION SYSTEMS. COMBINED TEXTS). SECOND EDITION. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS WORLD HEALTH ORGANIZATION. Rome, 2005.76 pag.
7. Joint FAO/WHO Food Standards Programme. CODEX ALIMENTARIUS COMMISSINO. PROCEDURAL MANUAL. Fifteenth edition. WHO FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS. Rome, 2005. 162 pag.
8. WHO Regional Office for Europe Copenhagen. European food and nutrition policies in action. Edited by Nancy Milio and Elisabet Helsing. WHO Regional Publications, European Series, No. 73. 176 pag.
9. UNDERSTANDING. THE CODEX ALIMENTARIUS. REVISED AND UPDATED. WHO FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS Rome, 2005.39 pag.
10. WHO. PUBLICATIONS. FOOD SAFETY. 36 pag.
11. FOOD SAFETY ISSUES. Food technologies and public health. FOOD SAFETY UNIT. WHO. 1995.23 pag.
12. FOOD SAFETY ISSUES. International Conference on Nutrition. A challenge ti the food safety community. FOOD SAFETY UNIT. WHO. 1996. 22 pag.
13. IRPTC. Chemical safety. 1984. 269 pag.