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FACULTY OF MEDICINE

CURRICULUM 0912.1 MEDICINE

DEPARTMENT OF PREVENTIVE MEDICINE

APPROVED at the meeting of the Commission for Quality at the meeting of the Council of the Assurance and Curricular Evaluation in Medicine Minutes no . 1 of 16 08. 21 President, PhD, univ. prof. Suman Serghei

APPROVED Faculty of Medicine II Minutes no. 1 of 21.09/ Dean of the Faculty PhD, associate professor Bețiu Mircea

APPROVED at the meeting of the Hygiene Discipline Minutes no. 1/A from 16.09.2021 Head of Hygiene Discipline, PhD, univ. prof. Bahnarel Ion J Bu

CURRICULUM

COURSE Specialty internship (initiation)

Integrated studies

COURSE TYPE: COMPULSORY

Curriculum developed by the team of authors:

Ciobanu Elena, PhD. med., associate professor Cebanu Serghei, PhD. med., associate professor Paraschiv Angela, PhD. med., associate professor

Chisinau, 2021



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I. PRELIMINARY

• Discipline overview: place and role of the discipline in the formation of specific competencies of the training program / specialty

The need of knowledge of hospital hygiene issues and the prevention of healthcare associated infections is justified primarily by the fact that this knowledge is necessary to maintain the health of both patients and hospital staff. Many non-communicable and communicable diseases among employees depend to a very large extent on multiple risk factors characteristic of the occupational environment of these institutions. The discipline is included in public health and studies the causes and conditions of the occurrence of infections associated with the care of patients and medical staff, including, and measures to prevent and control them. The main objectives of the discipline are: identification and assessment of risk factors in the etiology of diseases associated with medical and professional care, compliance with the hospital regime, proper management of waste from medical activities, rules and requirements for personal hygiene of patients and medical staff, measures to prevent in-hospital diseases. This discipline is closely related to fundamental disciplines, such as: physics, physiology, biochemistry, with various hygienic disciplines such as work hygiene, food hygiene, radiation hygiene, also with microbiology, epidemiology, occupational diseases, infectious diseases, etc. The specific objectives of the discipline are: knowledge and orientation in the hospital environment, identification of risk factors in the hospital environment and evaluating their action on the health of patients and medical staff, knowing how to reduce the risks present in the hospital environment, monitoring hygienic conditions in medical institutions, training practical skills.

• The mission of the curriculum (purpose) in professional training

Hygiene occupies an important place in the training of doctors, being the basic prophylactic discipline. The purpose of the internship is to teach the student to focus on theoretical and practical questions about the rules of behavior in the hospital environment in general and according to the hospital profile, identification and assessment of risk factors in the etiology of nosocomial diseases among patients and medical staff, but partly in the questions of the prophylaxis of various non-communicable diseases in which the occurrence of risk factors in the occupational environment play a decisive role, and in the questions of the prophylaxis of these diseases. Training the practical skills and competencies necessary for the proper conduct of activities in the hospital environment. Thus, students will gain knowledge in terms of maintaining the health of patients and medical staff, prophylaxis of infectious and non-infectious etiology, avoidance and reduction of occupational risk factors, application of rules and rules of personal hygiene in specific hospitals.

The language of instruction: English.

• Beneficiaries: first year students, Faculty of Medicine 2.

Discipline code			
The name of the discipline	Clinical training (initiation)		
Discipline responsable	Cebanu Serghei, PhD. med., associate	Ciobanu Elena, PhD. med., associate professor Cebanu Serghei, PhD. med., associate professor Paraschiv Angela, PhD. med., associate professor	
The year I	Semester / Semesters	II	

II. DISCIPLINE ADMINISTRATION



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Total number of hours, including:		150	
Course	-	Clinical stage	120
Seminars	-	Self-training	30
Evaluation form	Ε	Number of credits	5

III. DISCIPLINE TRAINING OBJECTIVES

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

- To know:
- the theoretical basis of nosocomial infections in the hospital in terms of their importance for human health;
- methods for studying risk factors in the etiology of nosocomial diseases in hospitals;
- the basis for medical examination and assessment of the health of patients and employees affected by nosocomial infections;
- the main nosocomial infections and their prophylaxis measures;
- some non-communicable diseases among employed staff, caused by the presence of risk factors in the occupational environment;
- the basics of safety and hygienic expertise of employees' working conditions;
- the possible influence of various substances, agents and factors (physical, chemical and biological) on the occurrence of communicable and non-communicable diseases in hospitals;
- the role of chemical and biological contaminants in medical waste in hospitals and their possible impact on health;
- the principles of prophylaxis and sanitary-epidemiological research in the occurrence of nosocomial infections;
- the basics of health promotion among patients and medical staff.
- To apply:
- the knowledge obtained when studying and evaluating the real state of systematization, planning, and technical-sanitary sanitation of public medical-sanitary institutions;
- the knowledge obtained when assessing the importance of the action on the health of the risk factors (physical, chemical and biological) in the occupational environment of the hospitals with different activity profile;
- the knowledge obtained in the evaluation of the hospital regime from hospitals of different profile;
- knowledge in developing recommendations for reducing or excluding certain risk factors for the occurrence of nosocomial infections in order to restore the health of patients and healthcare professionals;
- theoretical knowledge in the evaluation of waste from medical activities and the importance of their proper management to prevent nosocomial infections in hospitals;
- theoretical knowledge in assessing the conditions of the occupational environment of hospital medical staff based on the results of instrumental measurements and laboratory research of the analyzed samples;
- knowledge in health promotion by respecting the hospital regime specific to the activity profile, the norms and rules of personal hygiene and individual and collective protection;
- to apply the knowledge obtained in the daily activity;
- To integrate:
- creative human health issues and disciplines studied along the way;
- the ability to work on the issue with various medical professionals, including clinicians;
- the skills to organize prophylaxis, provide information on how to maintain health;
- and appreciate the impact of changes in the hospital (occupational) environment on health.



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IV. CONDITIONS AND PREREQUISITES

In order to study in depth the course in the perspective of solving the various problems in that chapter, the student must first have some knowledge and already possess some practical skills.

As a precondition for learning this course serves the study by students of disciplines (medical and biological physics, inorganic and organic chemistry), basic medical disciplines (anatomy, biochemistry, physiology, microbiology), the basics of hygiene (environmental hygiene, food hygiene, occupational hygiene, radiation hygiene), epidemiology, clinical disciplines (infectious diseases, internal diseases, occupational diseases). The student must also know the language of instruction, have digital skills, the ability to communicate and work in a team, qualities such as tolerance, compassion, vigilance, autonomy.

		Practical	Hours,
Nr. do	TEMA	work	individua work
1.	Introduction. Short history. Types of hospital construction. Types of hospitals by profile. The general functional organization of the hospital.	6	2
2.	Peculiarities of planning, construction and interior systematization of hospitals, therapeutic departments.	6	2
3.	Peculiarities of planning, construction and interior systematization of hospitals, surgical departments.	6	2
4.	Peculiarities of planning, construction and internal systematization of hospitals, infectious disease departments.	6	2
5.	Ensuring the sanitary-hygienic and anti-epidemic regime in hospitals. The circuit of staff, staff and visitors to the hospital. Measures to prevent the occurrence of infectious diseases. Notion of standard and additional precautions. Notion of cleaning and disinfection.	12	2
6.	Infections associated with healthcare - notion, classification, peculiarities of appearance and evolution.	6	2
7.	Quality assurance and safety control of the medical act.	6	2
8.	Hand hygiene. Methods of hand hygiene. Method specificity and addressability. The 5 steps of hand hygiene (WHO).	12	2
9.	Waste management resulting from medical activities in medical institutions. Waste classification. WRMA flow by type. Rules for the safe handling of medical waste.	6	2
10.	Peculiarities of occupational safety and health. Prevention of accidents at work. Notion, current issues. Algorithm of action in case of accident at work. First aid in case of accidental exposure. Case reporting.	12	2
11.	Occupational risks in hospitals. Prophylaxis and risk reduction measures.	6	2
12.	The working conditions of the medical staff and the hygienic requirements regarding the observance of the activity regime.	12	2
13.	General hygiene requirements in the hospital. Hygiene of the patient and medical staff. Personal protective equipment. Elements, specifics	12	2

V. THEMATIC AND ORIENTATIVE DISTRIBUTION OF HOURS



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	and conditions of application of PPE. Equipment and undressing steps and rules. Safe removal of PPE.		
14.	Organizing the activity of hospitals in public health emergencies, including in case of diseases with potential for global spread, e.g. Covid-19 pandemic.	6	2
15.	The hospital that promotes health.	6	2
		120	30
	Total	1	50

VI. PRACTICAL WORKS PURCHASED AT THE END OF THE SPECIALTY INTERNSHIP

The essential practical tasks are:

- The technique of classifying waste from medical activities.
- Equipping / disassembling protective equipment (gown, coveralls, trousers, goggles): order and rules.
- Selection of protective equipment according to the type of insulation (air conditioner, respirator, contact).
- The technique of applying the tightness test to the respiratory mask.
- Hand hygiene: steps and technique.
- Glove application technique (non-sterile / non-sterile), including removal of gloves.
- The technique of applying and wearing masks.
- Collection of biological liquid spilled on the ground (application of putty intended for this purpose).
- Recognition and management of waste stream, stages of terminal disinfection, etc.
- SPAULTING classification (critical, semi-critical and non-critical tools).
- Algorithm of actions in case of accident at work.
- Recognition and use of circuits in the hospital environment (staff, patient, hospital equipment, food, etc.).

VII. REFERENCE OBJECTIVES AND UNITS OF CONTENT

Objection	Content units
Topic 1. Introduction. Short history. Types of hospi The general functional organization of the hospital.	· · · · ·
 to know the principles of hospital construction, to know the types of hospitals by profile and their differentiation, apply rules of conduct in hospitals, to integrate the knowledge for the correct use of the medical equipment, to know the principles of general functional organization in hospitals. 	 Hygiene as a science. The purpose, tasks and objects of study of the discipline "Hygiene". Classification of study methods applied in Hygiene. Types and structure of hospitals. Types of hospitals by profile. Principles of organizing hygienic supervision in hospitals. Planning activities in hospitals.



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Theme 2. Peculiarities of the planning, construction hospitals.	and internal systematization of therapeutic
 to know the peculiarities of the planning of therapeutic hospitals, to know the peculiarities of the construction of therapeutic hospitals, to know the particularities of the systematization of the therapeutic hospitals, to know the principles of hygienic assessment of the location of therapeutic hospitals. 	 The role, structure and destination of therapeutic hospitals. Functions and services characteristic of therapeutic hospitals. Peculiarities of the internal systematization of the hospitals of therapeutic profile: hospitalization department, hospital wards, etc. Characteristic of the activities of the medical staff in the therapeutic profile hospitals.
Theme 3. Peculiarities of the planning, construction hospitals.	and internal systematization of surgical
 to know the peculiarities of the planning of surgical hospitals, to know the peculiarities of the construction of surgical hospitals, to know the particularities of the systematization of surgical hospitals, to know the principles of hygienic assessment of the location of surgical hospitals. 	 The role, structure and destination of specialized hospitals surgical. Functions and services characteristic of specialized hospitals surgical. Peculiarities of the internal systematization of the profile hospitals surgical : hospitalization ward, hospital wards, operating room, etc. Characteristic of the activities of the medical staff in the profile hospitals surgical.
Theme 4. Peculiarities of the planning, construction disease hospitals.	and internal systematization of infectious
 to know the peculiarities of hospital planning for infectious diseases, to know the peculiarities of the construction of infectious disease hospitals, to know the peculiarities of the systematization of infectious disease hospitals, to know the principles of hygienic assessment of the location of hospitals for infectious diseases. 	 The role, structure and destination of hospitals infectious diseases. The functions and services characteristic of hospitals infectious diseases. The peculiarities of the internal systematization of the hospitals of infectious diseases : hospitalization department, hospital wards and boxes, etc. Characteristic of the activities of the medical staff in the hospitals of infectious diseases.
Theme 5. Ensuring the sanitary-hygienic and anticircuit. Prophylaxis measures.	i-epidemic regime in hospitals. Hospital staff
 to know the particularities of the application of the sanitary-hygienic and anti-epidemic measures according to the profile of the hospital, to know the principles of the circuit of medical staff and medical supplies in the hospital, to know the prophylaxis measures and to apply them. 	 Principles of sanitary-hygienic and anti- epidemic surveillance in hospitals. Ensuring the sanitary-hygienic and anti- epidemic regime in hospitals. Notions of sterilization, disinfection, disinsection and rodent control. Monitoring and evaluation of the quality and effectiveness of the sanitary-hygienic and anti- epidemic regime.



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	5. The flow of staff and patients in the hospital, the flow of visitors, students, residents, hospital
	supplies, food.
Theme 6. Nosocomial infections in medical institution	ns - notion, classification, particularities.
 to define the notion of nosocomial infections, the organization and provision of the sanitary-hygienic regime in hospitals, to know the measures to prevent nosocomial infections in hospitals. Theme 7. Quality assurance and safety control of th	 Nosocomial infections - notion, classification, sources and conditions of spread. Specific and non-specific measures for the prevention of nosocomial infections. Objective methods of assessing the hygienic regime in hospitals.
 to know the notion of medical act and the principles of its accomplishment, to know the component parts of the medical act, to know the procedures and techniques for ensuring the quality of the medical act, to know the principles of control of the safety of the medical act. 	 Notion of the quality of the medical act. The principles of ensuring the medical act: safety, efficacy, the patient placed in the center of attention, the provision of care when needed, efficiency, fairness. Principles of measuring and estimating the quality of the medical act. Factors that affect the quality of the medical act.
Theme8. Hand hygiene. Methods of disinfecting the	hands of medical staff.
 to know the types of hand washing according to the specifics of the profile and medical activity section, be familiar with the methods and substances used in disinfecting the hands of medical staff, be able to assess the quality of hand disinfection. 	 The notion of hand hygiene of medical staff. Types of hand disinfection depending on the specifics of the profile and medical activity section. Stages of hand disinfection. Criteria for evaluating the quality of hand disinfection.
Theme9. Management of waste resulting from me	dical activities in public medical institutions
 Medical waste handling rules. know the principles of medical waste management, apply the knowledge of medical waste management in the hospital, know the rules for handling medical waste, be familiar with the rules for personal protection when handling medical waste, be familiar with the legislation governing the management of medical waste. 	 Order of the Ministry of Health on the Management of Waste from Medical Activity. Notion of medical waste, types and categories. Stages of medical waste management. Functions and obligations of medical staff in medical waste management. The discharge of waste resulting from medical activity. Safety of medical personnel during the management and disposal of medical waste.
Theme 10. Accident prevention in medical activity. I Notion, current issues.	
• to know the professional accidents related to the medical activity,	1. Notion of occupational accident in medical activity.





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Theme14. Organizing the activity of hospitals	in the Covid-19 pandemic. Public health
emergencies.	
• to know the types of public health emergencies,	1. Public Health Emergencies - notion,
• to know the specifics of the internal systematization	classification and their management.
of hospitals and the sanitary-hygienic and anti-	2. Infrastructure and hospital care resources in
epidemic requirements of hospitals during Covid-	the Covid-19 pandemic.
19,	3. Prevention and control of SARS-CoV-2
• know how to use individual and collective means	infection.
of protection to prevent the spread of SARS-CoV-	4. Individual and collective means of
2 infection.	protection.
Theme 15. The hospital that promotes health.	
• to know the notion of "Health Promotion",	1. Notion of "Health Promotion" (WHO).
• to know the elements of health promotion,	2. The role of hospitals in health promotion.
• to know the techniques of health promotion and	3. Challenges and shortcomings in the health
their application.	promotion process.
	4. Characteristics of health promotion elements
	in hospitals.
	5. Arguments for the introduction of the health
	promotion system in hospitals.
	6. Standards in health promotion in hospitals.

VIII. PROFESSIONAL COMPETENCES (SPECIFIC (CS) AND TRANSVERSAL (CT) AND STUDY PURPOSES

Professional skills (specific) (CS)

CP1. Responsible execution of professional tasks with the application of ethical values and norms as well as the provisions of the legislation in force.

CP2. Adequate knowledge of the sciences about body structure, physiological functions and the behavior of the human body in various physiological and pathological conditions, as well as relationships

existing between the state of health, the physical and the social environment.

CP3. Promoting a healthy lifestyle, applying prevention and self-care measures.

CP4. Interdisciplinary integration of the doctor's activity in a team with the efficient use of all resources.

CP5. Carrying out scientific research in the field of health and other branches of science.

CP6. Carrying out the pedagogical and methodical-didactic activity within the educational institutions higher and professional health professionals.

Transversal competences (TC)

CT1. Autonomy and responsibility in the activity.

CT2. Achieving interaction skills and social responsibility.

Study purposes

Upon completion of the course study the student will be able to:

•To identify the constructive and planning elements of the territory and the blocks of public medical institutions with different activity profile.

•To analyze the technical-sanitary endowment of the hospitals and the hygienic requirements of



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operation and operation.

• To identify the physical, chemical and biological risk factors in medical institutions with different activity profile and their importance for the health status of medical staff and patients with communicable and non-communicable (nosocomial) diseases.

• To assess the correctness of the management of the waste resulting from the medical activities at all stages stipulated in the hygienic regulation in force.

- Assess the working conditions and highlight the risk factors for the medical staff.
- To apply the methods of study and prophylaxis of nosocomial infections.
- Apply knowledge, methods and means of individual and collective protection.
- Observe measures to prevent the spread of Covid-19 infection.
- Identify public health emergencies.

• To comply with the prevention measures regarding the influence of the occupational environment in hospitals on the health of medical staff and patients with communicable and non-communicable diseases.

Nr Expected Implementation strategies **Evaluation criterias** Deadline product 1. The quality of judgments formed, logical thinking, flexibility. Working Systematic work in the During with library and media library. 2. The quality of the systematization the 1. information Explore current electronic of the informational material practical sources on the topic under / electronic obtained through own activity. internshi sources discussion. 3. Number and duration of web page р access. Working Analysis of relevant with bibliographic sources on the Workload, degree of understanding, During bibliographi topic. level of scientific argumentation, the c materials Analysis, systematization and 2. quality of conclusions, elements of practical and skills synthesis of information on creativity, demonstration, formation internshi acquired the topic. of personal attitude. р during the Analysis, systematization and internship description of practical skills. Ability to formulate conclusions and recommendations. Quality of conclusions and During Preparing Establishing the components recommendations. the of the report - topic, purpose, and Formation of personal attitude. practical 3. results, conclusions, practical supporting Clarity of presentation, presentation internshi applications, bibliography. the report and demonstration. р The quality and creativity of the exhibition, the graphic presentation.

IX. THE INDIVIDUAL WORK OF THE STUDENT



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X. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-EVALUATION

• Teaching and learning methods used

The practical internship is carried out, mainly, in a classic way, by guiding and explaining the methods, means and techniques for achieving / fulfilling the practical skills, according to the study program.

• Recommended learning methods

- The observation. Identifying the characteristic elements of some structures or phenomenon, describing these elements or phenomena.
- Classification. Identify the structures / processes to be classified. Determining the criteria on which the classification is to be made. Distribution of structures / processes by groups according to the established criteria.
- Analyze. Imaginary decomposition of the whole into component parts. Highlighting the essentials. Studying each element as part of the whole.
- Scheme / figure analysis. Select the required information. Recognition based on the knowledge and information selected structures indicated in the diagram, drawing. Analysis of the functions / role of recognized structures.
- The comparison. Analysis of the first object / process in a group and determination of its essential features. Analysis of the second object / process and establishment of its essential features. Comparing objects / processes and highlighting common features. Comparing objects / processes and determining differences. Establishing the criteria for distinction. Formulation of conclusions.
- Synthesis. Scientific method of researching phenomena, based on the transition from the particular to the general, from simple to compound, in order to reach generalization; combination of two or more elements that can form a whole.
- Elaboration of the scheme. Select the items to appear in the diagram. Play the chosen elements through different symbols / colors and indicate the relationships between them. Formulate an appropriate title and the legend of the symbols used.
- Modeling. Identify and select the elements needed to model the phenomenon. Imagination (graphic, schematic) of the studied phenomenon. Realization of the respective phenomenon using the elaborated model. Formulation of conclusions, deduced from arguments or findings.
- The experiment. Formulation of a hypothesis, starting from known facts, regarding the studied process / phenomenon. Verification of the hypothesis by carrying out the processes / phenomena studied in laboratory conditions. Formulation of conclusions, deduced from arguments or findings.

• Applied teaching strategies / technologies "Brainstorming", "Round Table"; "Case study"; "Creative controversy"; "Focus group technique".

- *Evaluation methods* (*including how to calculate the final grade*) During the practical internship, the students together with the medical staff and the internship leader carry out the work in groups, debates, practical activities, individual studies.
- Final assessment: exam
- *The final grade* consists of the grade for the specialized internship (quota 0.5) and the grade for the exam (quota 0.5).



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Grade of intermediate grades (annual average, grades from exam stages)	National scoring system	ECTS equivalent
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	

How to round the grades at the assessment stages

Failure to appear for the examination without good reason is recorded as "absent" and is equivalent to a grade of 0 (zero). The student is entitled to 2 repeated examinations of the non-passed exam.

XI. RECOMMENDED BIBLIOGRAPHY

- A. Mandatory:

- 1. Friptuleac Gr. Hygiene of medical institutions (Course). Chisinau, CEP Medicina, 2017.
- 2. Sanitary regulation on hygiene conditions for medical institutions. GD no. 663 of 23.07.2010.
- 3. Curse D. Hygiene. Course for students of the Faculty of Medicine, Medical Profile Study Program. Cluj-Napoca, 2014.
- 4. Sanitary regulation on the management of waste from medical activity. GD 696/2018 of 11.07.2018.

- B. Additional:

- 1. WHO Guidelines on Hand Hygiene in Health Care: a Summary. First Global Patient Safety Challenge. Clean Care is Safer Care.
- 2. Guidelines on Prevention and Control of Hospital Associated Infections.
- 3. Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings Recommendations of the Healthcare Infection Control Practices Advisory Committee.