

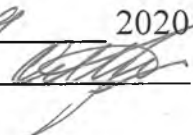
PRIVATE HIGHER EDUCATIONAL INSTITUTION
"INTERNATIONAL ACADEMY OF ECOLOGY AND MEDICINE"
Department of Social Medicine and Preventive Medicine

SYLLABUS
EDUCATIONAL DISCIPLINE

Medical Informatics

LEVEL OF HIGHER EDUCATION Second (master's) level
DEGREE OF HIGHER EDUCATION Master
FIELD OF KNOWLEDGE 22 Healthcare
SPECIALTY 221 Dentistry

Considered and approved
at a meeting of the Department of Social Medicine
and preventive medicine

Protocol № 1 from "01" 09 2020
Head of Department 

Kyiv 2020.

1. General information	
Subjects	Medical Informatics
Teacher (s)	Tytyinikov I.
Teacher's contact phone number	+38(067)-430-89-33
Teacher's e-mail	igortutunikov@gmail.com
Discipline format	Normative
The scope of discipline	90
Link to the distance learning site	
Consultations	
2. Discipline abstract	
<p>The educational discipline "Medical Informatics" is part of a cycle of professional-oriented training of specialists in the second (master's) level of higher education in the field of knowledge of 22 "Healthcare" specialty 221 "Dentistry". Educational discipline "Medical Informatics" is taught in order to familiarize students using modern information and communication technologies in the field of health care, since the development of computer technologies, their introduction into medicine and health requires medical workers to analyze morbidity, conduct Medical documentation, processing of medical and social information using standard procedures, including modern computer information technologies.</p> <p>The subject of study discipline is a means of computer equipment, personal computers software, modern technologies of processing of medical and biological information.</p> <p>Interdisciplinary connections: Discipline "Medical Informatics" is based on the study of disciplines (selection courses) "Informatics" and "European standard of computer literacy" and integrates with discipline "Informatics and Statistics"; Contributes to studying students of clinical, hygienic and social disciplines.</p>	
3. The purpose and objectives of the discipline	
<p>The purpose of teaching the educational discipline "Medical Informatics" is the formation of theoretical knowledge, practical skills and skills of working with a personal computer and various applications that are necessary for the effective use of modern software and technical means of computerization in the educational process, scientific and professional activities, Familiarity with the latest information technologies and opportunities for their application in professional activity.</p> <p>The main tasks of studying the discipline "Medical Informatics" are mastering the basics of modern information and communication technologies, tendencies on their development, familiarization with the principles of construction of information models, methods of processing medical images, methods of search, preservation, processing and transfer of medical and biological data, development of basic principles formalization and algorithmization of medical tasks.</p>	
4. Learning outcomes (competencies)	
<p>As a result of studying the discipline "Life safety" students should:</p> <p style="text-align: center;">KNOW:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Know methods of analysis, synthesis and subsequent modern training <input type="checkbox"/> Know the methods of application of knowledge in solving practical issues. <input type="checkbox"/> Mother specialized conceptual knowledge gained in the learning process. <input type="checkbox"/> Know the methods of assessing the quality of executable works <input type="checkbox"/> Have profound knowledge in the field of information and communication technologies used in professional activity <input type="checkbox"/> Know responsibilities and ways of performing tasks <input type="checkbox"/> Know the system of official document circulation in the professional work of the doctor, and ways of conducting it with the use of modern information technologies <input type="checkbox"/> know methods of multidimensional analysis of data and their operational analytical treatment with visualization of analysis results using modern information technologies <p style="text-align: center;">BE ABLE TO:</p> <ul style="list-style-type: none"> <input type="checkbox"/> To be able to analyze information, make substantiated decisions, be able to buy modern knowledge. <input type="checkbox"/> To be able to use knowledge in a variety of practical situations. <input type="checkbox"/> To determine the basic security principles in providing normal human life. <input type="checkbox"/> Be able to solve complex tasks and problems that arise in professional activity <input type="checkbox"/> To be able to provide qualitative performance of work to recognize typical models of psychological reactions of the body in extreme situations. <input type="checkbox"/> Apply traditional and non-traditional methods of improving the body. <input type="checkbox"/> To possess methods of quantitative and qualitative determination of pollution of food and water. <input type="checkbox"/> possess methods for reducing the number of pollutants in food products. 	

5. Organization of the study of the discipline

The volume of the course

Type of lesson	Total number of hours	90
Lectures		0
Seminars		40
Independent work		50

Signs of the course

Semester	Specialty	Course (year of study)	Normative / selective
3	221 Dentistry	2	Normative

Тематика курсу

Theme, plan	Form of employment	literature	Tasks, hours	Estimation weight	Deadline
Theme 1. Introduction and structure of medical informatics ..	Л 1	1-4,7	Abstract	15	According to the schedule
Theme 2. Transmission of information. Network technologies.	Л 2	1-4,7	Abstract	15	According to the schedule
Theme 3. Encoding and classification of medical and biological data.	Л 3	1-4,7	Abstract	15	According to the schedule
Theme 4. Visualization of medical biological data. Processing and analysis of medical images.	Л 4	1-4,7	Abstract	15	According to the schedule
Theme 5. Analysis of the biosignals. Methods of processing biosignals ..	Л 5	1-4,7	Abstract	15	According to the schedule
Theme 1. Fundamentals of statistical analysis of medical-biological data	C3 1	1-4,7	Working in pairs (individual tasks) 2 hours	20	According to the schedule
Theme 2. Checking statistical hypotheses. Correlation analysis.	C3 2	1-4,7	Working in pairs (individual tasks) 2 hours	20	According to the schedule
Theme 3. Formalization and algorithmization of medical tasks.	C3 3	1-4,7	Working in pairs (individual tasks) 2 hours	20	According to the schedule
Theme 4. Formal logic in solving diagnostic tasks, treatment and prevention of diseases.	C3 4	1-4,7	Working in pairs (individual tasks) 2 hours	20	According to the schedule
Final control - score.	ИК	1-7	Tests 2 hours	20	According to the schedule

6. Course evaluation system

The maximum number of points that a student can score for current educational activities for admission to the PC is 120 points.

The minimum number of points that a student must score for the current academic activity for admission to the exam is 72 points. The calculation of the number of points is based on the grades obtained by the student on the traditional (national) scale during the study of the discipline during the semester, by calculating the arithmetic mean (CA), rounded to two decimal places.

Assessment of students' independent work. Students' independent work, which is provided by the topic of the lesson along with the classroom work, is assessed during the current control of the topic in the relevant lesson. Assimilation of topics that are submitted only for independent work is checked during the final module control.

Table 1. Conversion of the average grade for current activities in a multi-point scale (for disciplines that end with an exam (differentiated credit))

4-point scale	120-point scale	4-point scale	120-point scale	4-point scale	120-point scale	4-6point scale	120-point scale
5	200	4,47	179	3,94	158	3,42	137
4,97	199	4,45	178	3,92	157	3,4	136

4,95	198	4,42	177	3,89	156	3,37	135
4, 2	197	4,4	176	3,87	155	3,35	134
4,9	196	4,37	175	3,84	154	3,32	133
4,87	195	4,35	174	3,82	153	3,3	132
4,85	19	4,32	173	3,79	152	3,27	131
4,82	193	4,3	172	3,77	151	3,25	130
4,8	192	4,27	171	3,74	150	3,22	129
4,77	191	4,24	170	3,72	149	3,2	128
4,75	190	4,22	169	3,7	148	3,17	127
4,72	189	4,19	168	3,67	147	3,15	126
4,7	188	4,17	167	3,65	146	3,12	125
4,67	187	4,14	166	3,62	145	3,1	124
4,65	186	4,12	165	3,6	144	3,07	123
4,62	185	4,09	164	3,57	143	3,05	122
4,6	184	4,07	163	3,55	142	3,02	121
4,57	183	4,04	162	3,52	141	3	120
4,55	182	4,02	161	3,5	140	Less 3	Not enough
4,52	181	3,99	160	3,47	139		
4,5	180	3,97	159	3,45	138		

The maximum number of points that a student can score is 200 points, the minimum number of points is 120 points.

The grade "passed" is given to a student who worked systematically during the semester, showed sufficient knowledge of the study material, performed the tasks provided by the program, showed solid knowledge of the discipline and is able to update them independently during further study.

The grade "not credited" is given to a student who did not show sufficient knowledge of the basic program material, made fundamental mistakes in performing the tasks provided by the program, does not have the skills of independent work.

Assessment of individual student tasks

Points for individual tasks are awarded to the student only if they are successfully completed and defended.

The number of points awarded for different types of individual tasks depends on their scope and significance, but not more than 10-12 points. They are added to the amount of points earned by the student in the classroom during the current academic activity.

Assessment of students' independent work

Students' independent work, which is provided by the topic of the lesson along with the classroom work, is assessed during the current control of the topic in the relevant lesson.

The minimum number of points that a student must score when studying the course - 120. The maximum number of points that a student can score for the current success in the study of this discipline - 200.

Practical training	Module 1
Classroom work (Content module 1)	
T 1-9	Amount - 200 (The maximum number of points that a student can score for the current educational activity, the minimum is 120 points).
Control work	20
Test	10
Working in pairs	5
Abstract	10-12

Conditions of admission to the final control

Semester control is provided in the form of credit. Provides a final grade on a 200-point scale as the sum of grades for the current control of knowledge (oral examination, tests, examination of abstracts), the results of the content module.

7. The policy of studying the discipline

The organization of the educational process is carried out with the use of the European Credit Transfer System (ECTS) to assess student performance. The points gained in the current survey, independent work and points of the final control are credited. This must take into account the student's presence in class and his activity during practical work. Inadmissible: absences and late classes; use of a mobile phone, tablet or other mobile devices during the lesson (except for the cases provided by the curriculum and methodical recommendations of the teacher); copying and plagiarism; untimely performance of the task, the presence of unsatisfactory assessments and more submitted theoretical and practical material.

Teacher of the Department

