## DANYLO HALYTSKY LVIV NATIONAL MEDICAL UNIVERSITY

Department of Social Medicine, Economics and Organization of Health Care



First Vice-Rector of Scientific and Pedagogical Work of Danylo Halytsky Lviv National Medical University Associate Professor SOLONYNKO I.I.

"<u>31" OF</u> 2023

### PROGRAM OF EDUCATIONAL DISCIPLINE "HEALTH CARE ORGANIZATION, INCLUDING WORK OF THE SURGICAL SERVICE"

(content module 3 «Organization of health care», content module 4 «Economics of health care») SB 3.2.5.2

> Individual professional course «Surgery»

preparation of the second (master's) level of higher education, branch of knowledge 22 "Health care", specialty 222 "Medicine"



Discussed and approved at the methodical meeting of the department of Social medicine, economics and Danylo Halytsky LNMU (minute No 8 dated 13 June 2023) Head of the department Associate Professor Myr T. G. Gutor

Approved by the Specialized methodical commission of Preventive medicine Danylo Halytsky LNMU (minute No 4 dated 15 June 2023) Head of methodical commission of Preventive medicine Professor

WILL V. I. Fedorenko

THE PROGRAMME IS DESIGNED BY: Head of the Department of Social Medicine, Economics and Organization of Health Care, PhD, associate professor T. G. GUTOR, director of studies, PhD, associate professor O. R. KOVALSKA, assistant N.F. TIMCHENKO, PhD, associate professor V.I. DIACHYSHYN

### **REVIEWERS**:

- FEDORENKO V.I. Professor, Doctor of Medical Sciences (MD), Head of the Department of General Medicine with Ecology at the Danylo Halytsky Lviv National Medical University
- LIUBINETS O. V. Professor, Doctor of Medical Sciences (MD)., Head of the Department of the Public Health at the Danylo Halytsky Lviv National Medical University

### **INTRODUCTION**

The program of the academic discipline studies **«Health care organization, including work of the surgical service»** (content module 3 **«Organization of Health Care», content module 4 «Economics of Health Care»**) (choice course: Surgery) is worked out according to the

Educational and professional program "*Medicine*" Standard of higher education of the *second* (*master's*) *level* field of knowledge 22 "*Health*" specialty 222 "*Medicine* "

#### DESCRIPTION OF THE ACADEMIC DISCIPLINE

The academic discipline **«Health care organization, including work of the surgical service»** (content module 3 **«Organization of health care», content module 4 «Economics of health care»**) envisages the mastering:

• *organization of health care, i.e.*, the functioning of the system as to providing the preservation, strengthening and recovery of public health, including the organization of medical care and system of public health;

• *economics of the system of public medical care* basing on the studies of the organizational and legal forms of medical institutions' activities in market conditions, economic analysis and methods of appraisal of financial and economic activities in health care.

|                                  | Number of credits, hou |          |                    |           |         | Form    |  |
|----------------------------------|------------------------|----------|--------------------|-----------|---------|---------|--|
|                                  |                        | classroo | om hours           | Self-     | Year    | of      |  |
| Structure of academic discipline | total                  | lectures | practical          | independ  | of      | control |  |
|                                  |                        | (hours)  | classes<br>(hours) | ent study | studies |         |  |
| «Health care organization,       |                        |          |                    |           |         |         |  |
| including work of the surgical   | 2,5/75                 | -        | 36                 | 39        |         |         |  |
| service»                         |                        |          |                    |           |         |         |  |
| content module 3                 |                        |          | •                  |           | 6 41    | ana dit |  |
| «Organization of health»         | 1,5/45                 | -        | 30                 | 15        | 6-th    | credit  |  |
| content module 4 «Economics      |                        |          |                    |           |         |         |  |
| of health care»                  | 1/30                   | -        | 6                  | 24        |         |         |  |

*The subject* of studies of the academic discipline is in modern principles of evidence-based medicine, theoretical and methodical bases of organization of health care and economics of health care (HC).

#### Interdisciplinary connections

• based on the studies of academic disciplines by students: history of medicine, sociology and medical sociology, hygiene and ecology, biostatistics, informatics, ethics, foundations of economical theories;

• integrated with these disciplines and, henceforth, with clinical and hygienic disciplines;

• provides the study of the legal and organizational forms of health care;

• lays the foundation of studies as to organization the medical and diagnostic process, and also the evaluation of its volume and quality while studying the clinical disciplines;

• promotes the formation of the prophylactic direction of activities of future doctors, taking into account the possible influence of factors of different origin on public health, risk assessment in working-out the complex medico-social measures in interaction with the public health system;

• promotes the formation of the economic worldview and main competent characteristics concerning the methodology of economic analysis of the medical institutions' activities at present.

### 1. THE AIM AND TASK OF THE ACADEMIC DISCIPLINE

<u>1.1. Aim of studies</u> of academic discipline «Health care organization, including work of the surgical service» (content module 3 «Organization of health care», content module 4 «Economics of health care») is the mastering of necessary knowledge, skills and acquisition of competencies as to research, analysis and evaluation of the status indicators of public health, quality of rendering medical aid, accuracy of accounting documentation performing that will be helpful in developing the recommendations (from the position of the evidence-based medicine) as to the prevention and elimination of harmful influence of agents on public health, in taking the administrative decisions.

<u>1.2. The main tasks</u> of the academic discipline «Health care organization, including work of the surgical service»

### **Content module 3 «Organization of public health»** is:

• mastering the theoretical foundations and legal forms of health care systems, its functions and strategic directions of development;

• mastering of forms, directions, tasks of public health system;

• mastering the foundations of organization medical aid, principles of evaluation of the organization and quality of rendering the various forms of medical aid to people within the conditions of health care reformation;

• knowledge formation concerning the questions connected with disability examination, its types, order of organization and actions of medical workers as to specific situation of the disability examination;

• mastering of the principles of working-out the administrative decisions, directed on the improvement of activities of the health care facilities;

### Content module 4 «Economics of health care»

• mastering the bases of economic analysis of the medical institution's activity;

• mastering the principles of analysis and evaluation of the financial and economic indices of the medical institutions' economic activity for the efficient use of available resources rationally;

• knowledge formation as to the questions of pricing policy, strategic and tactic planning of economic development of medical institution;

• familiarization with the business-plan elaboration of the entrepreneurship in the system pf health care.

**1.3. Competences and the results of studies**, the formation of which is promoted by a discipline. According to the Standard demands, it is the discipline that help the students to become *competent: General competences (GC)* 

- GC-1 Ability to abstract thinking, analysis and synthesis.
- GC-2 Ability to learn and master modern knowledge.
- GC-3 Ability to apply knowledge in practical situations.
- GC-4 Knowledge and understanding of the subject area and understanding of professional activity.
- GC-5 Ability to adapt and act in a new situation.
- GC-6 Ability to make informed decisions.
- GC-7 Ability to work in a team.
- GC-8 Ability to interpersonal interaction.
- GC-9 Ability to communicate in a foreign language.
- GC-10 Ability to use information and communication technologies.
- GC-11 Ability to search, process and analyze information from various sources.
- GC-12 Definiteness and perseverance in terms of tasks and responsibilities.
- GC-13 Awareness of equal opportunities and gender issues.

GC-14 – The ability to exercise their rights and responsibilities as a member of society, to be aware of the values of civil (free democratic) society and the need for its sustainable development, the rule of law, human and civil rights and freedoms in Ukraine.

GC-15 – Ability to preserve and multiply moral, cultural, scientific values and achievements of society based on understanding the history and patterns of development of the subject area, its place in the general system of knowledge about nature, society and in the development of society, techniques and technologies. active recreation and leading a healthy lifestyle, use different types and forms of physical activity for active recreation and a healthy lifestyle

### Special (professional, subject) competences (PC)

PC-1 – Ability to collect medical information about the patient and analyze clinical data.

PC-11 – Ability to solve medical problems in new or unfamiliar environments with incomplete or limited information, taking into account aspects of social and ethical responsibility.

PC-13 – Ability to carry out sanitary and hygienic, preventive measures.

PC-14 - Ability to plan and carry out preventive and anti-epidemic measures against infectious diseases.

PC-15 – Ability to conduct an examination of working capacity.

PC-16 – Ability to keep medical records, including electronic forms.

PC-17 – Ability to assess the impact of the environment, socio-economic and biological determinants on the health state of the individual, family, population.

PC-18 – Ability to analyze the activities of a doctor, subdivision, health care institution, ensure the quality of medical care and improve the efficiency of the use of medical resources.

PC-19 – Ability to organize and integrate the provision of medical care to the population and the marketing of medical services.

PC-20 – Ability to conduct epidemiological and medical-statistical studies of public health; processing of social, economic and medical information.

PC-21 – Clearly and unambiguously convey their own knowledge, conclusions and arguments on health care issues and related issues to specialists and non-specialists, in particular to students.

PC-22 – Ability to manage workflows, in the field of health care, which are complex, unpredictable and require new strategic approaches

PC-23 – Ability to develop and implement scientific and applied projects in the field of health care.

PC-24 – Adherence to ethical principles when working with patients, laboratory animals.

PC-25 – Adherence to professional and academic integrity, to be responsible for the accuracy of the obtained scientific results

#### - Digital competences

Detailing of competencies according to NQF descriptors in the form of "Competence Matrix"

| №    | Competence | Knowledge         | Skills                  | Communicat                | Autonomy and            |
|------|------------|-------------------|-------------------------|---------------------------|-------------------------|
| • .= | <b>F</b>   |                   |                         | ion                       | responsibility          |
|      |            | Kn1 -             | S1 - Ability to         | C1 -                      | AR1 -                   |
|      |            | Critical          | solve problems in       |                           | Responsibility          |
|      |            | understanding     | new or unfamiliar       |                           | for contributing to     |
|      |            | of problems in    | environments            | professional              | professional            |
|      |            |                   | with incomplete         | activity                  | knowledge and           |
|      |            | the border of     |                         | •                         | practice and / or       |
|      |            | fields of         | information,            |                           | evaluating the          |
|      |            | knowledge         | taking into             |                           | results of activity     |
|      |            |                   | account aspects         |                           | of teams and            |
|      |            |                   |                         |                           | collectives             |
|      |            | Kn2 -             | S2 - Ability to         | $C2$ - $\mbox{Clear}$ and | AR2 - Managing          |
|      |            | Specialized       | integrate               |                           | work or learning        |
|      |            | conceptual        | U                       |                           | processes, which are    |
|      |            | 0 /               | solve complex           |                           | complex,                |
|      |            |                   | problems in broad       |                           | unpredictable and       |
|      |            | modern            | or                      |                           | require new             |
|      |            |                   | multidisciplinary       | and                       | strategic approaches    |
|      |            | achievements in   | contexts                | arguments to              |                         |
|      |            | the field of      |                         | specialists and           |                         |
|      |            | professional      |                         | non-                      |                         |
|      |            | activity or field |                         | specialists, in           |                         |
|      |            | of knowledge      |                         | particular to             |                         |
|      |            | and is the basis  |                         | students                  |                         |
|      |            | for original      |                         |                           |                         |
|      |            | thinking and      |                         |                           |                         |
|      |            | conducting        |                         |                           |                         |
|      |            | research          |                         |                           |                         |
|      |            |                   | <b>S3</b> - Specialized |                           | <b>AR3 -</b> Ability to |
|      |            |                   | problem-solving         |                           | continue studies        |
|      |            |                   | skills/abilities        |                           | with a high degree      |

Matrix of competences

|    |   |     | required for<br>conducting<br>researches and / or<br>innovative activity<br>in order to develop<br>new knowledge<br>and procedures |    | of autonomy |
|----|---|-----|--|----|-------------|
| 1  | Ability to collect medical information about the patient and analyze clinical data.   | Kn1 | <b>S</b> 1   | C1 | AR1         |
| 2  | Ability to solve medical problems in new<br>or unfamiliar environments with<br>incomplete or limited information, taking<br>into account aspects of social and ethical<br>responsibility            | Kn1 | S1   | C2 | AR1         |
| 3  | Ability to carry out sanitary and hygienic, preventive measures   | Kn1 | S2   | C2 | AR1         |
| 4  | Ability to plan and carry out preventive and anti-epidemic measures against infectious diseases.  | Kn1 | S1   | C2 | AR1         |
| 5  | Ability to conduct an examination of working capacity   | Kn1 | <b>S</b> 3   | C2 | AR2         |
| 6  | Ability to keep medical records, including electronic forms   | Kn1 | <b>S</b> 3   | C2 | AR2         |
| 7  | Ability to assess the impact of the<br>environment, socio-economic and<br>biological determinants on the health state<br>of the individual, family, population.                                     | Kn1 | S1   | C2 | AR2         |
| 8  | Ability to analyze the activities of a doctor,<br>subdivision, health care institution, ensure<br>the quality of medical care and improve the<br>efficiency of the use of medical resources         | Kn1 | S1   | C2 | AR2         |
| 9  | Ability to organize and integrate the provision of medical care to the population and the marketing of medical services   | Kn1 | S2   | C2 | AR2         |
| 10 | Ability to conduct epidemiological and<br>medical-statistical studies of public health;<br>processing of social, economic and<br>medical information  | Kn1 | S2   | C2 | AR1         |
| 11 | Clearly and unambiguously convey their<br>own knowledge, conclusions and<br>arguments on health care issues and related<br>issues to specialists and non-specialists, in<br>particular to students. | Kn1 | S1   | C1 | AR1         |
| 12 | Ability to manage workflows, in the field<br>of health care, which are complex,<br>unpredictable and require new strategic<br>approaches  | Kn1 | S1   | C2 | AR1         |
| 13 | Ability to develop and implement scientific and applied projects in the field of health care  | Kn1 | S1   | C1 | AR3         |
| 14 | Adherence to ethical principles when working with patients, laboratory animals.   | Kn2 | S2   | C2 | AR2         |
| 15 | Adherence to professional and academic integrity, to be responsible for the accuracy of the obtained scientific results   |     | \$2  | C1 | AR3         |

#### **Results of studies:**

**Program learning outcomes (PLO)**, the formation of which is facilitated by the discipline:

PLO-1 – Have a thorough knowledge of the structure of professional activity. Be able to carry out professional activities that require updating and integration of knowledge. To be responsible for professional development, ability to further professional training with a high level of autonomy.

PLO-2 – Understanding and knowledge of basic and clinical biomedical sciences, at a level sufficient to solve professional problems in the field of health care.

PLO-3 – Specialized conceptual knowledge, which includes scientific achievements in the field of health care and is the basis for researches, critical understanding of problems in the field of medicine and related interdisciplinary problems.

PLO-15 – Organize the provision of medical care, medical and evacuation measures to the population and servicemen in the conditions of emergency situations and military operations, taking into account the field conditions.

PLO-16 – To form rational medical routes of patients; to organize interaction with colleagues in their own and other institutions, the organizations and establishments; to apply tools for the promotion of medical services on the market, based on the analysis of the needs of the population, in the conditions of functioning of the health care institution, its subdivision, in a competitive environment.

PLO-18 – Determine the state of functioning and limitations of a person's life and duration of incapacity for work with the execution of the relevant documents, in the conditions of the health care facility on the basis of data on the disease and its course, features of professional activity of a person, etc. Maintain medical records of the patient and the population on the basis of regulatory documents.

PLO-19 – Plan and implement a system of anti-epidemic and preventive measures for the occurrence and spread of diseases among the population.

PLO-20 – Analyze the epidemiological state and carry out measures of mass and individual, general and local prevention of infectious diseases.

PLO-21 – Search for the necessary information in the professional literature and databases of other sources, analyze, evaluate and apply this information.

PLO-22 – Apply modern digital technologies, specialized software, statistical methods of data analysis to solve complex health care problems.

PLO-23 – Assess the impact of the environment on state of human health to assess the incidence state of the population.

PLO-24 – Organize the necessary level of individual safety (own and persons cared for) in case of typical dangerous situations in the individual field of activity.

PLO-25 – Clearly and unambiguously convey their own knowledge, conclusions and arguments on health care issues and related issues to professionals and non-specialists.

PLO-26 – Manage workflows in the field of health care, which are complex, unpredictable and require new strategic approaches, organize the work and professional development of staff based on acquired skills of effective teamwork, leadership positions, proper quality, accessibility and fairness, ensuring the provision of integrated health care assistance.

PLO-27 – Communicate fluently in the state and English languages, both orally and in writing to discuss professional activities, researches and projects.

PLO-28 – Make effective decisions on health care issues, assess resources, take into account social, economic and ethical implications.

PLO-29 – Plan, organize and conduct activities for the specific prevention of infectious diseases, in accordance with the National Calendar of preventive vaccinations, both mandatory and recommended. Manage vaccine residues, organize additional vaccination campaigns, including immunoprophylaxis measures.

### 2. INFORMATION VOLUME OF THE ACADEMIC DISCIPLINE

For studying the academic discipline «Social medicine, public health» 2,5 credits, ECTS, 75 hours are stipulated.

# Theme 1. Outpatient clinics. Accounting and reporting documentation. Normative and legal regulation of the ESHC

The main documents, which are used for work accounting of subdivisions of polyclinics, content and order of its filling up. The calculation method and analysis of indicators of outpatient activity according to the data of the medical and preventive institution (f. No 20), disease report of cases in patients who live in the service area of the medical and preventive institution (f. No 12). The registration log of outpatients (f. No 074/o). The practical use of the International Classification of the primary medical care ICPC-2-E and the International statistical classification of diseases and related problems of health care of the Tenth reviewing ICD-10.

# Theme 2. The comprehensive assessment of the public health status based on the integral indicators. The risk factors of the acute respiratory dis-ease COVID-19, caused by a coronavirus SARS-CoV-2. Automated directories of the central database of the e-Health system

The use of statistical methods of determining and estimation public health status in interconnection with the factors that cause it. Definition of the main integral indicators of public health status.

#### Theme 3. Organization of inpatient care for the population. Accounting and reporting documentation. Functioning of the ESHC during military situation

The methods of correctness of filling and analysis the main accounting and reporting documentation used by a physician (who works in the hospital): The record sheet of movement of patients and hospital beds' fund in the inpatient department (f. No 007/o), The summary accounting information as to movement of patients and hospital beds' fund in the stationary, department, or profile of hospital beds (f. No 016/o), medical card statements of the inpatient/outpatient (f. No 027/o), case histories of pregnancies and labours (f. No 096/o), record charts of a newborn (f. No 097/o), patient's card who was discharged from a hospital (f. No 066/o), «The disease report, registered in patients, who live in the service area of the medical and preventive institution during 20\_\_ year» (f. No 12), «The report of the legal entity, not depending on organizational-legal form and individual- entrepreneur, who are engaged in economic activity in medical practice during 20\_\_ year» (f. No 21), «The report of medical aid to pregnant women, women in childbirth, parturient during 20\_\_ year» (f. No 21), «The report of medical aid to children during 20\_\_ year» (f. No 31-health).

# Theme 4. The technique of the accuracy of completion (filling-in) and analy-sis of the main accounting and reporting documentation HCF (health care facility). Central database registers of the ESHC

The methods of accuracy of filling and analysis the main accounting and reporting documentation made by a physician: outpatient's card (f. No 025/o), abstracts of a record of an outpatient/inpatient (f. No 027/o), Individual card of a pregnant and parturient (f. No 111/o), the exchange card of maternity home department of a hospital (women's consultation data, about pregnancy) (f. No 113/o), history of development of a child (f. No 112/o).

#### Theme 5. The organization of work and performing the medico-social expertise of the disability.

Assimilation of general provisions of expertise organization of temporary disability (ETD). The tasks as to ETD organization at different levels: attending physician, head of the profile department, medical consultative commission (MCC), deputy chief physician for ETD and person responsible for ETD in the health care system ETH. Types of medical expertise, their tasks. The essence of medico-social expertise of temporary and total disability. The level of efficiency loss. The determination of the sources and/or location of information which is used in expert examination of the temporary and total disability.

# Theme 6. The organization of the preventive measures in HCF at different levels, including during martial law. Electronic medical records in the ESHC, their differences from the medical information in medical record documentary forms

The methods and means of sanitary-hygienic study education of the population, their peculiarities in different health care facilities. The definition of notions: «promotion of health», «healthy lifestyle», «prophylactics/prevention». Types of prevention. The value of healthy lifestyle formation for preserving and strengthening the public health. The leading factors of lifestyle that influence on the public health status. The working-out of questionnaires to study the factors that influence on the public health. The value of public relations and mass media. Problems and possible mistakes. The press release in public health – the important form of reporting information to the general public: drafting and using.

#### Theme 7. Mortality. Filling in and analysis of accounting and reporting documentation

The main reporting documents, which regulate the doctor's activity and medical institution in a context of demographic processes (mortality rate): Medical certificate of perinatal death (f. No 106-2/o), medical certificate of death (f. No 106/o). The methods of correctness of filling and analysis of the main accounting and reporting documentation made by a physician: the exchange card of maternity home department of a hospital (women's consultation data, about pregnancy) (f. No 113/o), history of development of a child (f. No 112/o). «The disease report, registered in patients, who live in the service area of the medical and preventive institution during 20\_ year» (f. No 12), «The report of the legal entity, not depending on organizational-legal form and individual-entrepreneur, who are engaged in economic activity in medical practice during 20\_ year» (f. No 20).

# Theme 8. The organization of the medical insurance as a mechanism of financing the health care system. Interaction of the ESHC with other government systems and registers

The content of health insurance. The types of health insurance and peculiarities of their organization. The economic essence of health insurance. The place and role of a general practitioner in the health insurance. The

organization of quality control of medical service in the condition of health insurance medicine. The financial reliability of insurer. The insurance reserves. The technique of determining the health insurance rate. The economic analysis of health insurance in some developed countries.

# Theme 9. Birth. Filling in and analysis of accounting and reporting documentation. Preparation for the final attestation of graduates

The main reporting documents, which regulate the doctor's activity and medical institution in a context of demographic processes (birth rate): Medical birth certificate (f. No 103/o). The methods of correctness of filling and analysis of the main accounting and reporting documentation made by a physician: the exchange card of maternity home department of a hospital (women's consultation data, about pregnancy) (f. No 113/o), history of development of a child (f. No 112/o).

The determination of the sources and/or location of the information, which are used in situational tasks. The carrying-out the statistical data processing. The analysis of the health status of a certain contingent under study. The detection of the acting risk factors as to the negative influence on the public health status. The conclusions as to the results of the statistical research. The substantiation of directions concerning the improvement/optimization of the phenomenon under study and developing options of preventive measures. The graphic representation of the obtained statistical data. The maintain the medical records of a patient and the contingent in service. The coding of a diagnosis after ICD-10 viewing.

# Theme 10. The organization and content of financial management in the health care system. Organizational-management and technical-resource support of the ESHC development

The system of financing in the sphere of health care in modern conditions. The system of measures as to reforming of the budget policy in the health care system. The economic mechanism of mutual settlements between the health care facilities in modern conditions. The essence, types, forms, mechanism of payment of medical specialists. The peculiarities of formation and regulation of prices in the health care system. The pricing policy in the health care system. The structure of prices of medical service and analysis of its elements. The technique of cost calculation of medical services

The financial position of medical enterprises and mechanism of its evaluation. The main indices of the financial activity effectiveness of medical enterprises.

# Theme 11. Theoretical and organizational basics of economics of health care. The pricing in the health care system

Subject, methods, aim, and the main tasks of economics of health care as a economic category. The specifics and mechanism of action of economic laws in the field of health care and in medical care.

The essence, functions and methodology of activity planning in the health care system. The planning of scopes of activity of health care facilities and the personnel size in rendering medical aid. The strategy of development of health care system.

The essence of price. Functions of price. Factors of pricing. The mechanism of price regulation. Price classification in the health care system. The price policy of a medical institution. The stages of pricing process. The elements of price of medical service. The cost classification as to rendering the medical service: constant, variable, average, marginal, overhead (additional), alternative. The pricing methods. The pricing strategies. Health care services which are taxation-free, VAT.

# Theme 12. The economic analysis and performance evaluation of the activity of the health care facilities. Data quality management in digital healthcare environment

The essence and effectiveness of the economic analysis for the health care system, medical enterprise. The methods of economic evaluation as an instrument of the rational use of the industrial resources: «cost minimization», «costs-effectiveness», «costs-benefits», «costs- usefulness». The necessity of the economic evaluation of the medical programs, the latest methods of treatment. The essence and comparative characteristic of methods of economic analysis aiming to make administrative decisions. The indicators and criteria of medical effectiveness of activities of the health care facilities. The social effectiveness, its criteria. The determination and analysis of the economic effectiveness of activities of the health care facilities. The study of the economic losses in case of temporary disability, caused by people morbidity and traumatism. The economic effect and effectiveness. The direct losses and indirect losses, related with morbidity and invalidity of people.

# Theme 13. The services market in the health care system. The organization of the entrepreneurial and marketing activities in the health care system. Plans of development of e-Health system of Ukraine

The patterns of formation, functioning and peculiarities of market and medical services in health care

system. Organizational-and -economic and legal methods of market regulation in medical services. The conjuncture of services market in health care system: demand and supply, price and competition. The price flexibility of demand as an instrument of rational use of limited industry resources Medical services and their properties. Competition, types of competition structures.

The essence of entrepreneurship and its peculiarities in the health care system. The legal factors of the entrepreneurship activity in the health care system. The economic essence of entrepreneurship while rendering the medical aid. The organizational and legal forms of entrepreneurship activity, their comparative characteristics. The business-plan as an instrument of entrepreneurship activity.

The essence, principles, functions, tasks ad aim of marketing. The process of marketing research. The analysis of possibilities of market of medical services. The strategy and tactics of marketing activity. The ways of distribution the information and performance evaluation of the advertisement. The marketing controls. The components of the marketing activity of a medical institution. The stages of the complex marketing research of the medical services market. The analysis of the possibilities of the medical institution on the market of medical services in the health care system. Advertisement.

# Theme 14. Strategies of morbidity prevention, including COVID-19. Features of medical care during martial law. The pricing in the health care system. Credit

The methodical approaches to study the factors that determine the level of public health status and its separate contingents. The peculiarities of study the influence of factors: social and economic, social and biological, ecological and natural -and - climatic, medical and organizational. The use of biostatistical methods (derivative quantities and average values, method of standardization, correlative and regressive analysis, parametric and nonparametric evaluation of probability of results of studies, grading, rating evaluation). Indicators of public health status by WHO.

The essence of price. Functions of price. Factors of pricing. The mechanism of price regulation. Price classification in the health care system. The price policy of a medical institution. The stages of pricing process. The elements of price of medical service. The cost classification as to rendering the medical service: constant, variable, average, marginal, overhead (additional), alternative. The pricing methods. The pricing strategies. Health care services which are taxation-free, VAT.

|    |  | Lectures | Practical classes | Self-independent<br>study | Individual tasks |
|----|--|----------|-------------------|---------------------------|------------------|
| 1. | Outpatient clinics. Accounting and reporting documentation. Normative and legal regulation of the ESHC   | -        | 5                 | -                         | -                |
| 2. | The comprehensive assessment of the public health status based on the integral indicators. The risk factors of the acute respiratory dis-ease COVID-19, caused by a coronavirus SARS-CoV-2. Automated directories of the central database of the e-Health system | -        | -                 | 5                         | -                |
| 3. | Organization of inpatient care for the population. Accounting and<br>reporting documentation. Functioning of the ESHC during military<br>situation   | -        | 5                 | -                         | -                |
| 4. | The technique of the accuracy of completion (filling-in) and analysis of<br>the main accounting and reporting documentation HCF (health care<br>facility). Central database registers of the ESHC  | -        | -                 | 5                         | -                |
| 5. | The organization of work and performing the medico-social expertise of the disability.   | -        | 5                 | -                         | -                |
| 6. | The organization of the preventive measures in HCF at different levels, including during martial law. Electronic medical records in the ESHC, their differences from the medical information in medical record documentary forms                                 | -        | -                 | 5                         | -                |

### **3. THE STRUCTURE OF ACADEMIC DISCIPLINE**

| 7.  | Mortality. Filling in and analysis of accounting and reporting documentation  | - | 5    | -        | - |
|-----|---|---|------|----------|---|
| 8.  | The organization of the medical insurance as a mechanism of financing<br>the health care system. Interaction of the ESHC with other government<br>systems and registers                             | - | -    | 6        | - |
| 9.  | Birth. Filling in and analysis of accounting and reporting documentation  | - | 5    | -        | - |
| 10. | The organization and content of financial management in the health care   |   | -    | 6        | - |
| 11. | Theoretical and organizational basics of economics of health care.  | - | 5    | -        | - |
| 12. | The economic analysis and performance evaluation of the activity of the<br>health care facilities. Data quality management in digital healthcare<br>environment                                     | - | -    | 6        | - |
| 13. | The services market in the health care system. The organization of the<br>entrepreneurial and marketing activities in the health care system. Plans<br>of development of e-Health system of Ukraine | - | -    | 6        | - |
| 14. | system. Credit  | - | 6    | -        | - |
|     | Total hours 74/2,5 credits ECTS   | 0 | 36   | 39       | 0 |
|     | Final control   |   | Cred | lit test |   |

## 4. THE THEMATIC PLAN OF LECTURES are not predicted

## 5. THE THEMATIC PLAN OF PRACTICAL CLASSES

| No  | No Theme of practical classes  |    |  |  |
|-----|--|----|--|--|
|     | Outpatient clinics. Accounting and reporting documentation. Normative and legal regulation of the ESHC   |    |  |  |
| 2.  | Organization of inpatient care for the population. Accounting and reporting documentation. Functioning of the ESHC during military situation       | 5  |  |  |
| 3.  |  |    |  |  |
| 4.  | Mortality. Filling in and analysis of accounting and reporting documentation   | 5  |  |  |
|     | Birth. Filling in and analysis of accounting and reporting documentation. Preparation for the final attestation of graduates.                      | 5  |  |  |
| 6.  | Theoretical and organizational basics of economics of health care.   | 5  |  |  |
| 7.  | Strategies of morbidity prevention, including COVID-19. Features of medical care during martial law. The pricing in the health care system. Credit | 6  |  |  |
| Tot |  | 36 |  |  |

## 6. THE THEMATIC PLAN OF THE SELF-INDEPENDENT STUDY

| No | Theme of self-independent study   | Number<br>of hours | Type of control                         |
|----|---|--------------------|---|
| 1. | The comprehensive assessment of the public health status based on the integral indicators. The risk factors of the acute respiratory disease COVID-19, caused by a coronavirus SARS-CoV-2. Automated directories of the central database of the e-Health system | 5                  | Current control<br>on practical classes |
| 2. | The technique of the accuracy of completion (filling-in) and analysis<br>of the main accounting and reporting documentation HCF (health care<br>facility). Central database registers of the ESHC   | 5                  | Current control<br>on practical classes |
| 3. | The organization of the preventive measures in HCF at different levels, including during martial law. Electronic medical records in the ESHC, their differences from the medical information in medical record  | 5                  | Current control on practical classes    |

|    | documentary forms   |    |   |
|----|---|----|---|
|    | The organization of the medical insurance as a mechanism of financing<br>the health care system. Interaction of the ESHC with other government<br>systems and registers                       |    | Current control on practical classes    |
| 5. | The organization and content of financial management in the health<br>care system. Organizational-management and technical-resource<br>support of the ESHC development                        | 6  | Current control<br>on practical classes |
|    | The services market in the health care system. The organization of the entrepreneurial and marketing activities in the health care system. Plans of development of e-Health system of Ukraine | 6  | Current control<br>on practical classes |
| 7. | The economic analysis and performance evaluation of the activity of<br>the health care facilities. Data quality management in digital healthcare<br>environment                               |    | Current control<br>on practical classes |
|    | Total   | 39 |   |

### 7. THE INDIVIDUAL TASKS ON THE ACADEMIC DISCIPLINE

The performance of individual situational task is stipulated for every theme of practical classes and the theme of self-independent study.

The evaluation of the SIS (self-independent study) is made by a lecturer in the format «credited» or «not credited».

### 8. METHODS OF STUDY

1. Verbal/oral methods: conversation, narration, explanation, work with literature.

- 2. Visual methods: illustration, demonstration, observation.
- 3. Practical methods: situational tasks, individual work, research work.
- 4. Interactive methods: discussion, work in small groups, brain storm, case-method, business game.

### 9. METHODS OF CONTROL:

Types of control: current and final control. The form of final control: credit test. The criteria of estimation. While estimating the level of assimilation of every theme by a student during the current educational activity, he/she is given marks/grades according to the 4-grade (traditional) scale considering the approved criteria of estimation. All types of work, stipulated by the curriculum, are taken into account. Every student must receive a mark for every theme. Forms of estimation of the current educational activity are standardized and include the control of the theoretical and practical training. The received marks (in traditional scale) are converted into grades.

**10. THE CURRENT CONTROL** is exercised on every practical lesson, taking into account the processing of those themes which are not included into the structure of practical classes, but studied by a student independently.

The performance of test situational tasks of the licensed examination "Step-2 (Rrok-2) "The general medical training" on academic discipline.

**11. THE FINAL CONTROL** (credit test) is exercised after completing the study of a subject during the last practical lesson. Those students who succeeded in performing all types of work, stipulated by a curriculum, and their scores for the discipline studied is not less the minimal one, are allowed to pass the final control.

# **12. THE SCHEME OF ACCRUALS AND GRADE DISTRIBUTION RECEIVED BY STUDENTS:**

*The maximum number of* grades for the student's current educational activity, during the term for the discipline that can be accepted, is equal to 200 grades.

*The minimal number of* grades for the student's current educational activity, during the term for the discipline that can be accepted, is equal to 120 grades.

*The calculation of number of grades* is done based on the marks received by a student (in traditional scale) while his/her studying of the discipline, per arithmetic means (AM), rounded-off to two designations after coma. The resulting value is converted into grades according to the multigrade scale, in this way:

$$x = \frac{CA \times 200}{5}$$

For conveniences, the table of recalculation after 200-grade scale is given below:

| 4-200-4-200-4-gradegradegradegradegradescalescalescalescalescale | 200-<br>grade |
|--|---------------|
|  |               |
| scale scale scale scale scale                                    |               |
|  | scale         |
| 5 200 4.45 178 3.92  | 157           |
| 4.97 199 4.42 177 3.89   | 156           |
| 4.95 198 4.4 176 3.87  | 155           |
| 4.92 197 4.37 175 3.84   | 154           |
| 4.9 196 4.35 174 3.82  | 153           |
| 4.87 195 4.32 173 3.79   | 152           |
| 4.85 194 4.3 172 3.77  | 151           |
| 4.82 193 4.27 171 3.74   | 150           |
| 4.8 192 4.24 170 3.72  | 149           |
| 4.77 191 4.22 169 3.7  | 148           |
| 4.75 190 4.19 168 3.67   | 147           |
| 4.72 189 4.17 167 3.65   | 146           |
| 4.7 188 4.14 166 3.62  | 145           |
| 4.67 187 4.12 165 3.57   | 143           |
| 4.65 186 4.09 164 3.55   | 142           |
|  |               |
| 4.62 185 4.07 163 3.52   | 141           |
| 4.52 181 3.99 160 3.45   | 138           |
| 4.5 180 3.97 159 3.42  | 137           |
| 4.47 179 3.94 158 3.4  | 136           |

# Recalculation (conversion) of the average mark for current activity into multigrade scale on discipline is ended with the credit test

4-

grade

scale

3.37

3.35

3.32 3.3

3.27

3.25

3.22

3.2

3.17

3.15

3.12

3.1

3.07

3.02

3 < 3 200-

grade

scale

135

134 133

132

131

130

129

128

127

126

125

124

123

121 120

is insufficient

*The self-independent work* is estimated during the current control of a theme during the relevant lesson the acquisition of themes which are only for self-independent study are monitored in the final control.

**The final control** is exercised with the aim to estimate the results of studies on a certain educational-and-qualification level and on separate completed stages after traditional scale and ECTS scale. The final control includes the semester control and student certification.

The semester control of the academic discipline «Social medicine, public health» is performed in the form of a credit test in the amount of educational material, which is defined by the curriculum of the academic discipline and in time limits envisaged by working syllabus and student's individual syllabus.

*The semester credit test* – is the form of final control that includes the assessment of educational material assimilation of a certain discipline by a student, based on the results of his/her academic achievements, while performing all types of work, envisaged by the curriculum.

#### The determination of scores on academic discipline, obtained by a student

The discipline rating is determined as the sum of grades/points of the current educational activity (not less than 120 grades).

The grades of a discipline are converted both the ECTS scale and the 4-grade scale and vice-

#### versa.

The grades of students of the same specialty, who score points of the discipline, are ranged after ECTS scale in this way:

| ECTS evaluation | Statistical indicator     |
|-----------------|---------------------------|
| А               | the best 10 % of students |
| В               | the next 25 % of students |
| С               | the next 30 % of students |
| D               | the next 25 % of students |
| Е               | the last 10 % of students |

The grades on discipline, obtained by students who successfully executed the curriculum, and converted into traditional 4-grade scale according to the absolute criteria, are represented in the table:

| Grades on discipline   | Mark after the<br>4-grade scale |
|--|---------------------------------|
| From 170 to 200 grades   | 5                               |
| From 140 to 169 grades   | 4                               |
| From 139 to minimum number of grades, which a student must receive         | 3                               |
| Below, there is the minimum number of grades, which a student must receive | 2                               |

The ECTS is not converted into the traditional scale, because the ECTS scale and the 4-grade scale are independent.

The objectivity of evaluation of the students' educational activity is checked up by statistical methods (correlation coefficient between the ECTS mark and the traditional mark).

### **13. THE METHOTOLOGICAL SUPPORT**

- The theoretical questions to themes of practical classes
- The theoretical questions for final control
- The tasks for current knowledge control
- The tasks for final knowledge control
- The list of tasks for self-independent study
- The methodological guides/instructions for the practical classes
- The methodological guides/instructions for the self-independent study.

### **14. REFERENCES**

#### Basic

1.Gruzeva T.S., Lekhan V.M., Ognev V.A., Galienko L.I., Kryachkova L.V., Palamar B.I., Grechishkina N.V., Litvynova L.O., Gutor T.G. [etc.]. Biostatistics: a textbook for the training of specialists of the second (master's) level of higher education / edited by Prof. T.S. Gruzeva. Vinnytsia: New Book, 2020. 384 p.

2. The public health: textbook for students of higher educational establishments. Vinnytsia: «New book/Nova Knyha », pub. 3. 2013. 560 p.

3. Workshop for preparation for practical classes in the academic discipline "Public Health". Lviv, 2020.

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5.Oxford Textbook of Global Public Health, 6 edition. / Edited by Roges Detels, Martin Gulliford, Quarraisha Abdool Karim and Chorh Chuan Tan. Oxford University Press, 2018. 1728 p.

### Additional

1.Brigitte Baldi, David S. Moore Practice of Statistics in the Life Sciences Fourth Edition. W. H. Freeman; Fourth edition. 2018. 768 p.

2.Board Review in Preventive Medicine and Public Health. Gregory Schwaid. Elsevier, 2017. 450 p.

3.Liam J. Donaldson, Paul Rutter. Donaldson's Essential Public Health, Fourth Edition. CRC Press, Taylor&Francis Group, 2017. 374 p.

### **15. INFORMATION RESOURCES**

The Legislation of Ukraine. The electronic resource: zakon.rada.gov.ua/

The medical legislation of Ukraine. The electronic resource: http://mozdocs.kiev.ua/

The statistical data of Ukraine. The electronic resource: http://www.ukrstat.gov.ua/

The statistical data of the Lviv region. The electronic resource: https://www.lv.ukrstat.gov.ua/

The center of public health WHC of Ukraine (Ministry of Health of Ukraine): https://phc.org.ua/ The Ukrainian database of medico-statistical information «Health for all»:

http://medstat.gov.ua/ukr/news.html?id=203 The World Health Organization www.who.int

The European Regional Bureau of WHO www.euro.who.int/ru/home

The Kokhranivsky centre of evidence-based medicine www.cebm.net

The Kokhranivsky library www.cochrane.org

The National medical library of the USA – MEDLINE PubMed www.ncbi.nlm.nih.gov/PubMed

The Canadian evidence-based centre of public care www.cche.net

The Centre of control and disease prevention www.cdc.gov

The Journal British Medical Journal www.bmj.com

The Journal Evidence-Based Medicine www.evidence-basedmedicine.com