



CD 8.5.1 DISCIPLINE CURRICULUM

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FACULTY OF MEDICINE

STUDY PROGRAM 0912.1 MEDICINE

Nicolae Testemitanu Chair of Social Medicine and Health Management

APPROVED

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

Minutes No. 2 of 6.05.17

Chairman, PhD, associate professor

Suman Serghei

(signature)

APPROVED

at the Council meeting of the Faculty Medicine no. II

Minutes No. 9 of 20.08.17

Dean of Faculty, PhD, associate professor

Bețiu Mircea

(signature)

APPROVED

approved at the meeting of the chair Nicolae Testemitanu Social Medicine and Health Management

Minutes No. 6 of 15.01.18

Head of chair, PhD, professor,

Tintiuc Dumitru

(signature)

SYLLABUS

DISCIPLINE SOCIAL MEDICINE AND MANAGEMENT

Integrated studies

Type of course: **Compulsory**

Chisinau, 2018



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I. INTRODUCTION

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

Discipline “Social Medicine and Management” includes a wide range of demographic, epidemiological, statistical, social and other methods related to the analysis of population health and its determinants. Health care management studies concern the contemporary forms and methods of organization, planning, financing, evaluation and control of the medical healthcare services within the health system

- **Mission of the curriculum (aim) in professional training:**
To learn the main methods used in assessing the health status of the population, as well as the contemporary health care approaches for the prevention and control of non-communicable diseases. Mastering the basic issues concerning the organization of the health systems in the world.
- Language (s) of the course: English, French.
- Beneficiaries: students of the IV year, faculty Medicine II.

II. MANAGEMENT OF THE DISCIPLINE

Code of discipline	U.08.O.077		
Name of the discipline	Social Medicine and Management		
Person(s) in charge of the discipline	Penina O., Raevschi E., Obreja G.		
Year	IV	Semester/Semesters	VIII
Total number of hours, including:			60
Lectures	10	Practical/laboratory hours	
Seminars	25	Self-training	25
Clinical internship			
Form of assessment	CD	Number of credits	2

III. TRAINING AIMS WITHIN THE DISCIPLINE

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

- **at the level of knowledge and understanding:**
 1. To know and to use appropriately the notions specific to the discipline, as well as its theoretical and practical contents;
 2. To understand the relationship between the main demographic processes (fertility, mortality and migration) and the size and structure of the population by gender and age;
 3. To know the determinants of the demographic ageing process of the population and its medical and social consequences;
 4. To know the principal methods of the demographic mortality analysis by sex, age and causes of death. Infant and perinatal mortality in the world;
 5. International Classification of Diseases and Causes of Death (CIM). Coding diseases and causes of death according to the Xth Revision of the CIM;
 6. To know the types of morbidity according to the data sources;
 7. To understand the main factors that influence on the level of incidence and prevalence, as well as the interrelationship between incidence and prevalence;
 8. To be familiar with the prevention levels for non-communicable diseases. The role of screening.
 9. To know the socio-medical aspects of non-communicable diseases in the developed and developing countries;
 10. To understand the principles of the organization of health care systems in the world and in the Republic of Moldova;
 11. To know the principles of the organization of payment system and the provision of medical healthcare services, as well as the methods of assessing their activity.



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• **at the application level:**

1. To use the statistical indicators (ratio, proportion, rate, risk) in the epidemiological analysis of population health data;
2. To calculate population size using the balance equation. Calculation and interpretation of indicators on natural growth, migration balance and annual population growth;
3. To interpret the shape of the population pyramid for developed and developing countries;
4. To calculate the demographic dependence rate. Interpretation of results;
5. Crude birth, death and migration (in-migration and out-migration) rates. Calculation and interpretation.
6. Specific mortality rates by sex, age and causes of death. Calculation and interpretation;
7. Infant, perinatal and maternal mortality rates. Calculation and interpretation;
8. The correct use of mortality indicators for the comparative analysis of the health status of heterogeneous populations. Interpretation of crude and standardized (adjusted) mortality rates;
9. Calculation of morbidity indicators: cumulative incidence (risk incidence), incidence density, point prevalence. Estimation of person-years;
10. Evaluation of health care services. Calculation and interpretation of results.

• **at the integration level:**

1. To integrate the obtained knowledge and skills in the field of Social Medicine and Health Management with the knowledge obtained from clinical disciplines in order to carry out qualitative scientific researches;
2. To apply the knowledge and skills obtained within the course to the realization of a student's scientific research in the framework of his/her license thesis and future career.

IV. PROVISIONAL TERMS AND CONDITIONS

1. Language requirements (intermediary level);
2. Basics of the school mathematics;
3. Basic computer skills (MS Office Word, EXCEL, PowerPoint);
4. Ability to work in a team;
5. Non-work related activities are strictly forbidden, disconnected mobile phones;
6. Lateness is not tolerated.

V. THEMES AND ESTIMATE ALLOCATION OF HOURS

Lectures, practical hours/ laboratory hours/seminars and self-training

Nr. d/o	THEME	Number of hours		
		Lectures	Practical hours	Self-training
1.	Social Medicine and Health Management as a science. The subject matter of the study. Methodological aspects of the evaluation of population health and its determinants.	1	2	2
2.	Introduction to demography. Demographic state, event and process. Balance equation. Natural growth and net migration. Annual population growth. Demographic processes (population dynamics). Basic crude demographic rates.	1.5	3	3
3.	Population structure by sex and age. Age pyramid. Demographic ageing process: characteristics, factors and consequences. The medical and social issues of the older population.	1	4	4
4.	Mortality analysis. Types of mortality rates. Life expectancy at birth and life tables. Measuring infant and perinatal mortality. Maternal mortality.	1.5	4	4
5.	Measurement of morbidity. Health and disease. Types and indicators of morbidity. International Classification of Diseases and Causes of Death (Revision X). Consequences of the disease.	1	4	4
6.	Non-communicable diseases. Surveillance systems for behavioural risk factors in the world. Global strategies for the prevention and control of non-communicable diseases.	1.5	4	4



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Nr. d/o	THEME	Number of hours		
		Lectures	Practical hours	Self-training
7.	Management and organization of health systems in the world. The main ways of funding health systems. Organization of payment and provision of medical healthcare services. Evaluation of the quality of medical healthcare services.	1.5	2	2
8.	The health system in the Republic of Moldova. Management of the medical healthcare services in the country. Health legislation specific to the medical healthcare services.	1	2	2
Total		10	25	25

VI. REFERENCE OBJECTIVES OF CONTENT UNITS

Objectives	Content units
Theme (chapter) 1. Demographic analysis of population health	
<ul style="list-style-type: none"> - <i>To define</i> the basic terminology and theoretical concepts for understanding demographic phenomena; - <i>To know</i> the importance of measuring and analysing the health of the community; - <i>To demonstrate</i> the ability to solve practical problems related to the use of demographic methods to analyse the health of a community; - <i>To apply</i> methods for calculating crude and specific mortality rates by sex, age and causes of death; - <i>To integrate</i> the knowledge in demographic analysis of population health with other disciplines. 	<ol style="list-style-type: none"> 1. Public Health as a science: the main goal and functions. Public health approach to a health problem in a community. Distinguishing between ratio, proportion and rate. Health indicators and health determinants; 2. Introduction to demographic analysis of population health. Events and demographic processes. Calculation of the population size through the balance equation. Natural growth and net migration. Annual population growth. 3. Data sources in demography. Population census and population register. Vital statistics. 4. Population structure by sex and age. Age pyramid: types and characteristics. Population ageing process. Dependency ratio. The medical and social issues of the older population. 5. Mortality analysis. Crude, specific and standardized mortality rates. Mortality by causes of death. Life expectancy at birth and life tables. 6. Infant and perinatal mortality. Types and methods of calculation. Definitions of “live-birth” and “still-birth” according to the World Health Organization. Maternal mortality.
Theme (chapter) 2. Measuring morbidity. Prevention and control of non-communicable diseases	



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Objectives	Content units
<ul style="list-style-type: none"> - <i>To define</i> the specific terminology for morbidity analysis; - <i>To know</i> the global strategies for control and prevention of non-communicable diseases; - <i>To demonstrate</i> ability to solve practical problems related to morbidity analysis at the community level; - <i>To apply</i> methods for calculating morbidity indicators; - <i>To integrate</i> the knowledge in morbidity analysis with other disciplines. 	<ol style="list-style-type: none"> 1. Definitions of health and disease. Morbidity: definition, methods of measurement, sources of information. Types of morbidity by sources of information. 2. Morbidity indicators: incidence and prevalence. Cumulative incidence (incidence of risk), incidence odds and incidence density. Point prevalence and period prevalence. Interrelation between incidence and prevalence. 3. International Classification of Diseases and Causes of Death (Revision X). Principles of codification of diseases and causes of death. 4. Consequences of the disease: impairment, disability, handicap (definitions). Global burden of disease. Year of Potential Life Lost (YPLL) and Disability-Adjusted Life Years (DALY). 5. Non-communicable diseases: definition, types, risk factors and prevention levels. Screening. Surveillance systems for behavioral risk factors in the world. 6. Global strategies on non-communicable diseases prevention and control. Assessment of health indicators in Europe and the World: European Core Health Indicators (ECHI); Global Monitoring Framework for Non-Communicable Diseases (GMF).

Theme (chapter) 3. Management and organization of health systems

<ul style="list-style-type: none"> - <i>To define</i> the health system, its functions and final results according to WHO; - <i>To know</i> the ways of financing the health systems in the world and in the Republic of Moldova; - <i>To demonstrate</i> the ability to perform the comparative analysis of health systems; - <i>To apply</i> methods for analysing the quality of medical services; - <i>To integrate</i> health management knowledge with other disciplines. 	<ol style="list-style-type: none"> 1. Health system: definition, functions and objectives / final results according to the WHO. 2. Funding function of the health system. Main ways of financing health systems. Classification of health systems according to financial flow. 3. Financing the health system from the state budget. Characteristics, advantages and disadvantages. 4. Financing health care through health insurance. Social health insurance. Private, voluntary health insurance. Characteristics, advantages and disadvantages. 5. Organization of the payment and service delivery system. The main ways of payment for medical services: pay per service, pay per treatment case, pay per day care / hospitalization, global budget, etc. 6. Organization of health systems in the countries of Europe and the Republic of Moldova. Analysis of the quality of medical services; 7. Emergency medical assistance, primary health care, hospital health care, mother and child health care services. Assessment and analysis of indicators. Health legislation specific to health care activity in the Republic of Moldova (main notions).
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VII. PROFESSIONAL (SPECIFIC (SC)) AND TRANSVERSAL (TC) COMPETENCES AND STUDY OUTCOMES

✓ Professional (specific) (SC) competences

CP5.	<ul style="list-style-type: none"> - Knowledge of the basic concepts and concepts regarding social medicine and health management; - Capabilities to perform an analysis of population health based on demographic and epidemiological indicators; - Knowledge of global strategies to control and prevent non-communicable diseases, as well as systems for assessing population health indicators in the European Community and the world; - Abilities to promote the health of the population; - Development of moral values and professional ethics.
CP6.	<ul style="list-style-type: none"> - Abilities to elaborate a scientific paper in the biomedical field (e.g., licentiate thesis, scientific article, conference report, etc.)



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✓ Transversal competences (TC)

CT1.	<ul style="list-style-type: none"> - To understand the importance of statistical data analysis in the context of "evidence-based medicine"; - To use the knowledge of statistical analysis in the context of other disciplines and practical problems.
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✓ Study outcomes

The student at the end of the course will be capable:

- Acquiring the specific issues of the subject "Social Medicine and Health Management" and correlating it with the knowledge acquired in other disciplines;
- Analysis, explanation and interpretation of phenomena that characterize the population health state (mortality, morbidity) in correlation with the risk factors and health determinants;
- Knowledge, understanding of the basic notions and concepts of health management and of the management of medical services supply, their appropriate use in professional communication;
- Understanding the principles of organization and functioning of health systems in the world;
- Accepting the principles of organizing the health care system and the provision of medical services and methods of analyzing their activity;
- Capacity building to carry out a scientific research on the assessment of the health status of the population.

Note. Study outcomes (are deduced from the professional competencies and formative valences of the informational content of the discipline).

VIII. STUDENT'S SELF-TRAINING

No.	Expected product	Implementation strategies	Assessment criteria	Implementation terms
1.	Working with information sources	To read the material carefully for the corresponding theme from the methodological recommendations [1,2]. Study of the minimum and additional bibliography.		During the semester
3.	Solving the practical problems	Practical problems [1,2] are solved after analyzing the information on the topic in the textbook. Some practical problems can be solved on the computer with MS Office EXCEL in the computer room of the Department.	Solving the problems of the situation	During the semester

IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

• *Teaching and learning methods used*

For more effective learning in the course "Social Medicine and Management", both traditional methods (conversation, exercise) and those considered today to be more effective for university education (case study, project method) are used. Practical methods use frontal methods, individual activity methods, group activity methods. Practical training within the course uses computer-assisted training / self-training (MS Office EXCEL, PowerPoint).

• *Applied teaching strategies / technologies (specific to the discipline)*

Communication Technologies such as PowerPoint presentations are used during the theoretical lectures and practical seminars.



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

Current:

The current assessment during the semester includes 2 midterm tests.

- Midterm test #1 – Demographic analysis of the population health
- Midterm test #2 – Measuring morbidity and health systems

The semester mark is calculated as the average of two midterm tests and the project presentation mark.

Final: the final assessment is done in the form of differentiated colloquium.

Those students who have the semester mark less than 5.00 and / or did not recover their absence(s) for the practical seminars (no absences are admitted for the practical seminars) are not admitted to the differentiated colloquium by the Department.

The differentiated colloquium represents the test-grid test which includes 30 random questions from each of the studied themes. The test-grid covers 40% single-choice questions and 60% multiple-choice questions. The student has at his/her disposal 30 minutes to answer to the grid-test. The list of questions for the final exam is approved by the Department.

The final mark is calculated as the average of the semester mark and the mark for the test-grid obtained at the differentiated colloquium.

Method of mark rounding at different assessment stages

Intermediate marks scale (annual average, marks from the examination stages)	National Assessment 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	D
6,01-6,50	6,5	
6,51-7,00	7	C
7,01-7,50	7,5	
7,51-8,00	8	B
8,01-8,50	8,5	
8,51-8,00	9	A
9,01-9,50	9,5	
9,51-10,0	10	

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

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

X. RECOMMENDED LITERATURE:

A. Compulsory:

1. Penina O., Raevschi E., Tintiuc D., 2016. Overview of demography. Methodological recommendations for the course in Social Medicine & Health Management for medical students. Chisinau: Medicina, 32 p.



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(accesibil in format electronic pentru studenți prin SIMU).

2. Raevschi E., Penina O., Obreja G., 2017. Measuring population health: approaches to noncommunicable disease prevention and control Methodological recommendation for the course in Social medicine & Health management for medical students. Chisinau: Medicina, 38 p. (accesibil in format electronic pentru studenți prin SIMU).

B. Additional

1. Joceline Pomerleau and Martin McKee, 2005. Issues in Public Health. Open University Press. 240 p.
2. Roger Detels, et al., Oxford Textbook of Global Public Health. Oxford University Press, 2015. 1854 p.
3. Samuel Preston, Patrick Heuveline, Michel Guillot, 2000 - Demography: Measuring and Modeling Population Processes. 303 p.
4. Tintiuc D (ed.), Grossu Iu, et. al., Sănătate publică și management, CEP "Medicina", Chișinău, Universitatea de Medicină și Farmacie "Nicolae Testemițanu", 2007, 896 p.