

SYLLABUS
Spring semester 2023-2024 academic year
Educational program " _____ "

ID and name of course	Independent work of the student (IWS)	Number of credits			General number of credits	Independent work of the student under the guidance of a teacher (IWST)	
		Lectures (L)	Practical classes (PC)	Lab. classes (LC)			
6B10103 GM	The number of SSW is 4					The number of IWST is 6.	
ACADEMIC INFORMATION ABOUT THE COURSE							
Learning Format	Cycle, component	Lecture types	Types of practical classes		Form and platform final control		
<i>Choose Online</i>		no			The written task in Moodle, a creative assignment		
Lecturer - (s)	Farida Iskakova						
e-mail :	iskakovaf@gmail.com						
Phone :	+1-412-996-4245; +7-701-101- 3086						
Assistant - (s)							
e-mail :							
Phone :							
ACADEMIC COURSE PRESENTATION							
Purpose of the course is to form knowledge of the basics of epidemiology, evidence-based medicine, and biostatistics, skills, and abilities to plan and conduct scientific research on public health	Expected Learning Outcomes (LO)*			Indicators of LO achievement (ID)			
	1. Demonstrate knowledge of epidemiology, biostatistics, and evidence-based medicine bases.			1.1 Knows base principles, types, and methods of epidemiology.			
				1.2 Knows statistical methods.			
	2. Possess knowledge of the basics of Evidence-Based Medicine for critically evaluating scientific and medical information.			2.1 Formulates a research question using the PICO, PICOT structure.			
				2.2 Show the skills to search for scientific publications in the evidence-based PubMed/Medline, Cochrane Library, Embase, etc.			
				2.3 Explain the ethical issues surrounding social science and medical research with human participants.			
3. Determine appropriate research design and methods given specific research objectives.			3.1 Explain and choose different research designs.				
			3.2. Can work in IBM SPSS program				
			3.3 Can measures of Disease Occurrence using Descriptive and Inference Statistics.				
4. Be able to plan and write a research proposal.			4.1 Write a research proposal, including the problem statement, background, hypotheses, and methods for conducting the proposed research.				
			4.2 Creates a questionnaire.				
			4.3 Downloads and studies IBM SPSS program				
5. Conducts research using the knowledge and skills acquired in this course.			5.1 Searches for publications and writes a literature review on the problem.				
			5.3 Conducts research (creation of a questionnaire, collection).				
			5.4. Creates a database and performs statistical processing of the results.				

	5.5 Draws up the results of the study (thesis).
Prerequisites	
Postrequisites	
Learning Resources	<p>Literature: main, additional.</p> <ol style="list-style-type: none"> 1. Gordis, Leon, Epidemiology, 5th Edition, W.B. Saunders Company, 2013. 2. High-Yield Biostatistics, Epidemiology, & Public Health, 4th Edition, Kaplan USMLE, Lecture Notes, Behavioral Sciences and Social Science, 2017.-229p. 3. Fundamentals of Biostatistics. Seventh Edition. Rosner. - 2016.-856 p. 4. Primer of Biostatistics. Seventh Edition. Stanton A. Glantz, Ph.-2009.-297p. 5. Medical Statistics at a Glance Workbook. Front Cover. Aviva Petrie, Caroline Sabin. John Wiley & Sons, 2013 - Medical - 120 p. 6. Evidence-Based Medicine. How to Practice and Teach EBM (3rd Edition). S.E. Straus, W.S. Richardson, Paul Glasziou, R. Brian Haynes. 7. Literature Reviews in Social Work. Robin Kiteley and Christine Stogdon - 2014.-20 p. <p>Additional literature</p> <ol style="list-style-type: none"> 8. Evidence-Based Answers to Clinical Questions for Busy Clinicians Workbook - 2009.- 26p. 9. Appraisal of Guidelines for Research & Evaluation II. The AGREE Next Steps Consortium May 2009.- 52 p. <p>Research infrastructure</p> <ol style="list-style-type: none"> 1. Computer class. <p>Professional scientific databases</p> <ol style="list-style-type: none"> 1. Microsoft Excell Manual// chrome-extension://adminfinance.umw.edu/tess/files/2013/06/Excel-Manual1.pdf 2. SPSS Survival Manual 6th edition. Julie Pallant – 2016 <p>Internet resources</p> <ol style="list-style-type: none"> 1. Kaznu Library 2. MOOC / video lectures, etc. 3. www.who.org 4. www.cdc.gov 5. https://pubmed.ncbi.nlm.nih.gov/ <p>Software (optionally)</p> <ol style="list-style-type: none"> 1. IBM SPSS – 26 version 2. Excel program

Academic course policy	<p>The academic policy of the course is determined by Documents available on the main page of IS Univer .</p> <p>Integration of science and education. The research work of students, undergraduates, and doctoral students is a deepening of the educational process. It is organized directly at the university's departments, laboratories, scientific and design departments, in student scientific and technical associations. Independent work of students at all levels of education is aimed at developing research skills and competencies based on obtaining new knowledge using modern research and information technologies. A research university teacher integrates the results of scientific activities into the topics of lectures and seminars (practical) classes, laboratory classes, and the tasks of the SSWT and SSW, which are reflected in the syllabus and are responsible for the relevance of the topics of training sessions and assignments.</p> <p>Attendance. The deadline for each task is indicated in the calendar (schedule) for the implementation of the content of the course—failure to meet deadlines results in loss of points.</p> <p>Academic honesty. Practical/laboratory classes, SSW, develop the student's independence, critical thinking, and creativity. Plagiarism, forgery, cheat sheets, and cheating at all stages of completing tasks are unacceptable.</p> <p>Compliance with academic honesty during the period of theoretical training and at exams, in addition to the main policies, is regulated by "<u>Regulations on checking students' text documents for borrowings</u>". Documents are available on the main page of IS Univer.</p> <p>Basic principles of inclusive education. The university's educational environment is conceived as a safe place where there is always support and equal attitude from the teacher to all students and students to each other, regardless of gender, race/ethnicity, religious beliefs, socio-economic status, physical health of the student, etc. All people need the support and friendship of peers and fellow students. For all students, progress is more about what they can do than what they can't. Diversity enhances all aspects of life. All students, especially those with disabilities, can receive counseling assistance by phone/e- mail iskakovaf@gmail.com or whats up via video link in MS Teams <i>enter a permanent link to the meeting.</i></p>
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Integration MOOC (massive open online course). In the case of integrating MOOC into the course, all students need to register for MOOC. The deadlines for passing MOOC modules must be strictly observed in accordance with the course study schedule.

ATTENTION! The deadline for each task is indicated in the calendar (schedule) for the implementation of the content of the course, as well as in the MOOC. Failure to meet deadlines results in loss of points.

INFORMATION ABOUT TEACHING, LEARNING AND ASSESSMENT

Score-rating letter system of assessment of accounting for educational achievements				Assessment Methods																																				
Grade	Digital equivalent points	points, % content	Assessment according to the traditional system	<p>Criteria-based assessment is the process of correlating actual learning outcomes with expected learning outcomes based on clearly defined criteria. Based on formative and summative assessment.</p> <p>Formative assessment is a type of assessment that is carried out in the course of daily learning activities. It is the current measure of progress. Provides an operational relationship between the student and the teacher. It allows you to determine the capabilities of the student, identify difficulties, help achieve the best results, timely correct the educational process for the teacher. The performance of tasks, the activity of work in the classroom during lectures, seminars, practical exercises (discussions, quizzes, debates, round tables, laboratory work, etc.) are evaluated. Acquired knowledge and competencies are assessed.</p> <p>Summative assessment - type of assessment, which is carried out upon completion of the study of the section in accordance with the program of the course. Conducted 3-4 times per semester when performing IWS. This is the assessment of mastering the expected learning outcomes in relation to the descriptors. Allows you to determine and fix the level of mastering the course for a certain period. Learning outcomes are evaluated.</p> <table border="1"> <thead> <tr> <th colspan="2">Formative and summative assessment</th> <th>Points % content</th> </tr> </thead> <tbody> <tr> <td>1. Activity in discussions of topic in classes</td> <td></td> <td>1. 10</td> </tr> <tr> <td>2. Work in practical classes</td> <td></td> <td>2. 10</td> </tr> <tr> <td>3. Independent work</td> <td></td> <td>3. 10</td> </tr> <tr> <td>4. Design and creative activity</td> <td></td> <td>4. 30</td> </tr> <tr> <td>5. Final control (exam)</td> <td></td> <td>5. 40</td> </tr> <tr> <td>Activity in discussions of topic in classes</td> <td></td> <td>10</td> </tr> <tr> <td>Work in practical classes</td> <td></td> <td>10</td> </tr> <tr> <td>Independent work</td> <td></td> <td>10</td> </tr> <tr> <td>Design and creative activity</td> <td></td> <td>30</td> </tr> <tr> <td>Final control (exam)</td> <td></td> <td>40</td> </tr> <tr> <td>TOTAL</td> <td></td> <td>100</td> </tr> </tbody> </table>	Formative and summative assessment		Points % content	1. Activity in discussions of topic in classes		1. 10	2. Work in practical classes		2. 10	3. Independent work		3. 10	4. Design and creative activity		4. 30	5. Final control (exam)		5. 40	Activity in discussions of topic in classes		10	Work in practical classes		10	Independent work		10	Design and creative activity		30	Final control (exam)		40	TOTAL		100
Formative and summative assessment		Points % content																																						
1. Activity in discussions of topic in classes		1. 10																																						
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TOTAL		100																																						
A	4.0 _	95-100	Great																																					
A-	3.67	90-94																																						
B+	3.33	85-89	Fine																																					
B	3.0	80-84																																						
B-	2.67	75-79																																						
C+	2.33	70-74																																						
C	2.0	65-69																																						
C-	1.67	60-64	Satisfactorily																																					
D+	1.33	55-59																																						
D	1.0	50-54	Unsatisfactory																																					

Calendar (schedule) for the implementation of the content of the course. Methods of teaching and learning.

A week	Topic name	Number of hours	Max. ball
MODULE 1 INTRODUCTION TO EPIDEMIOLOGY AND EVIDENCE-BASED MEDICINE			
	PC 1. Introduction to Epidemiology.		5
	PC 2. Epidemiological Study Design.		5
	IWST 1. Control work, test, individual / group project, essay, situational task, testing, portfolio, etc. at the teacher's choice. Estimated 25-30 % of the total points for foreign control. Consultations on the implementation of IWS 1 ATTENTION. Number of IWST (6-7), IWS (2-5) for 15 weeks.		
	PC 3. Epidemiology of communicable and non-communicable diseases.		5

	IWS 1. Choose one health problem and describe using epidemiological questions What? Where? When? Who? Why? and How?		15
	PC 4. 5 stages of Evidence-Based Medicine. Search and critical analysis of published research.		5
	PC 5. Systematic review and meta-analysis. Evaluation of clinical protocols and recommendations. GRADE.		5
MODULE 2 INTRODUCTION TO BIOSTATISTICS			
	PC.6. Research proposal. Create and share the questionnaire.		5
	IWST 2. Colloquium (situational task). Consultations on the implementation of IWS 2		
	PC 7. Measurement in Epidemiology. Frequencies, rates, ratio.		5
	IWS 2. Organization of scientific research		15
Midterm control 1 (tests)			100
	PC 8. Summarizing data: Properties and methods of Frequency Distributions. Measures of Central Location and spread.		5
	IWST 3. Consultations on the implementation of IWS 3		
	PC 9. Types of statistical hypotheses. Hypothesis testing. P-value. Standard error and confidence interval.		5
	IWS3. Create of database in Excel and SPSS.		15
	PC 10. Biostatistics: Descriptive statistics. Databases (Excel, SPSS).		5
	IWST 4. Consultation on the implementation of IWS 4		
MODULE 3 CONSTRUCTION OF A RESEARCH PROPOSAL			
	PC 11. Introduction to analytical statistics. Methods for the analysis of qualitative variables, independent and related samples (Chi-square test. Fisher's exact test, McNemar's test).		5
	IWST 5. Consultation on the implementation of IWS 4		
	PC 12. Parametric Tests (T-tests, ANOVA).		5
	With RO 3.		
	PC 13. Non-parametric Tests (Mann-Whitney U-test, Wilcoxon U-test, Kruskal-Wallis Test, Friedman Test.		5
	IWS4. Overview of research results		15
	PC 14. Correlation (Pearson and Spearman) and regression. Survival analysis Log-rank test.		5
	PC 15. Presentation of scientific projects.		5
	IWST 6. Consultation on final exam		
Midterm control 2 (tests)			100
Final control (exam)			100
TOTAL for course			100

Dean _____

Head of Department _____

Lecturer **Farida Iskakova** _____

RUBRICATOR OF THE SUMMATIVE ASSESSMENT

CRITERIA EVALUATION OF LEARNING OUTCOMES

Task name (points, % content from 100% MC, copy from the calendar (graphics) implementation of the content of the training course, methods of teaching and learning

Criterion	"Excellent" Max. weight in %	"Good" Max. weight in %	"Satisfactory" Max. weight in %	"Unsatisfactory" Max. weight in %
	95- 100 %	80-94%	64-79%	<63%

Criterion	"Excellent" 20-25%	"Good" 15-20%	"Satisfactory" 10-15%	"Unsatisfactory" 0-10%
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THEMATIC PLAN AND CONTENT OF PRACTICAL STUDIES

№	Topic	Content	Resources
	2	3	4
1	Introduction to Epidemiology: Definition. Core	Basic concepts and areas of application. Theories of causality and probability. epidemiological triad. Factors related to the infectious agent, the environment, and the susceptible individual. The concept of the epidemic process and ways of transmission of infection. epidemiological approach. Fundamentals of surveillance. Population, sentinel, and syndromic surveillance. Mini presentation. CBL Case study.	<ol style="list-style-type: none"> 1. Gordis, Leon, Epidemiology, 5th Edition, W.B. Saunders Company, 2013, p. 20-54, 55-61, 61-78 2. Principles of Epidemiology in Public Health Practice, 3d Edition, CDC, US Department of Public Health, 2012. Lesson 1-4. 3. High-Yield Biostatistics, Epidemiology, & Public Health, 4th Edition, p.86-96 4. Kaplan USMLE, Lecture Notes, Behavioral Sciences and Social Science, 2017, p.3-10 5. An Introduction to Epidemiology. Wolfgang Ahrens, Klaus Krickeberg, Iris Pigeot, p.3-20 6. CDC-materials https://www.cdc.gov/csels/dsepd/ss1978/lesson5/section2.html
2	Epidemiological Study Design.	Epidemiological methods: descriptive, analytical, and experimental. Case reports (clinical cases), case series (series of cases); ecological, cross-sectional studies, case-control, cohort study. Randomized and non-randomized clinical trials. Measures, bias, and confounders. Advantages and limitations of epidemiological methods. Diagnostic and screening tests.	<ol style="list-style-type: none"> 1. Kaplan USMLE, Lecture Notes, Behavioral Sciences and Social Science, 2017, p.11-14, 17-24 2. Gordis, Leon, Epidemiology, 5th Edition, W.B. Saunders Company, 2013, p.197-232, p.158-194, p.235-247, p.250-280, p.282-296, 346-367 3. An Introduction to Epidemiology. Wolfgang Ahrens, Klaus Krickeberg, Iris Pigeot, p. 29-35

		sensitivity and specificity. Likelihood ratio. Predictive value (negative and positive). The use of epidemiological methods in clinical medicine. Glossary. Mini presentation. CBL - Case study.	4. High-Yield Biostatistics, Epidemiology, & Public Health, 4th Edition, p.57-71, 82-92 5. Wolfgang, A. Handbook of Epidemiology. 5 vol.//Ahrens Wolfgang, Peugeot Iris. - 2 ed.- Springer Reference, 2014, p.187-388
3	Epidemiology of communicable and	Epidemiology of infectious diseases. Occurrence, mechanism, and ways of transmission of infectious diseases. Epidemiological classification of infectious diseases. Standard case definition: presumptive, probable, and confirmed cases. Outbreak investigation. Stages of investigation. Anti-epidemic and preventive measures in the focus of infection. Glossary. Epidemiology of chronic non-communicable diseases: cardiovascular, oncological diseases, COPD, diabetes. Causes and conditions for the occurrence and spread of HND. Measurement of risks, prevalence rates, outcomes and treatment effectiveness. Epidemiology of dental diseases. Glossary. Mini presentation. CBL. case study.	1. High-Yield Biostatistics, Epidemiology, & Public Health, 4th Edition, p.96-100 2. Gordis, Leon, Epidemiology, 5th Edition, W.B. Saunders Company, 2013, p. 54-56, p.328-335 3. Wolfgang, A. Handbook of Epidemiology. 5 vol.//Ahrens Wolfgang, Peugeot Iris. - 2 ed.- Springer Reference, 2014, v.5 4. Cancer Epidemiology: Principles and Methods. Isabel dos Santos Silva. WHO. -1999.-437 p. 5.Communicable disease control in emergencies. A field manual. Edited by M.A. Connolly.2005.-194 p.
4	5 stages of Evidence-Based Medicine. Search and critical analysis of published research.	Principles of Evidence-Based Medicine. The history of the development of Evidence-Based Medicine. World development experience. The value of Evidence-Based Medicine for clinical practice. 5 stages of evidence-based medicine. Formulation and transformation of a clinical problem into a question using the PICOT principle. Finding and identifying the best evidence to answer. Evaluation of the quality and reliability of evidence. Implementation of the results of a critical assessment in clinical practice and evaluation of the results of the work done (audit). Glossary. Select appropriate resources and search for evidence. Medline/PubMed, Cochrane Collaboration Data Base, Cochrane Library, EMBASE. Search strategy: keywords, logical operators (Boolean Operators), phrases (Phrase Search), by author (Author Search), by journal title (Journal Search), subject headings (MeSH) Operations with search results. Mini presentation. CBL Case study.	1. Fundamentals of Evidence-Based Medicine, K Prasad, 2013, 1-7 p, Chapter 2, 19-25 p 2. Essential Evidence-based medicine, D, Mayer, 2010, 9-18 p 3. Evidence-Based Answers to Clinical Questions for Busy Clinicians Workbook- 2009.-26p. 4. Essentials of Evidence-based Clinical Practice. Second Edition. -2008.-349 p. 5. Medline/PubMed, Cochrane Collaboration Data Base, Cochrane Library, EMBASE

5	Systematic review and meta-analysis. Evaluation of clinical protocols and recommendations. GRADE.	Studies summarizing other studies: a systematic review and meta-analysis. Stages of creating a systematic review. Stages of meta-analysis. Options for presenting meta-analysis results in a systematic review. Search strategy for systematic reviews. Assessing the quality of systematic reviews using the AGREE system. Evaluation of clinical guidelines. Recommendation classes: I, II, II-a, II-b, III. Glossary. Mini presentation. CBL - case studies.	<ol style="list-style-type: none"> 1. Literature Reviews in Social Work. Robin Kiteley and Christine Stogdon.- 2014.-20 p. 2. APPRAISAL OF GUIDELINES FOR RESEARCH & EVALUATION II. The AGREE Next Steps Consortium. - May 2009.-52 p.
6	Research proposal. Create and share questionnaire.	Conceptualization stage of health services research. Select and formulate a research problem. Theories and appropriate theoretical frameworks in health research. Types of research reviews (e.g., information synthesis, literature reviews, and meta-analysis) and their purposes. General categories in research review.	<ol style="list-style-type: none"> 1. Fundamentals of Evidence-Based Medicine, K Prasad, 2013, 27-31 p, 109-112 p 2. Essential Evidence-based medicine, D, Mayer, 2010, 367-377 p 3. Evidence-based medicine, Dermot P.B.McGovern et all, 2005, 62-76 p 4. How to read a paper. T. Greenhalgh. -2003.-240 p. 5. Evidence-Based Answers to Clinical Questions for Busy Clinicians Workbook. - 2009.-26p.
7	Measurement in Epidemiology. Frequencies, rates, ratio.	Counts, frequencies, rates and ratio. Measuring disease incidence, prevalence and mortality rates. Calculation and interpretation of indicators of morbidity, prevalence, mortality of the population. Visual presentation of epidemiological data. Registration of cases. Data collection system. Analysis, interpretation, and presentation of surveillance data. Glossary. Mini presentation. CBL Case study.	<ol style="list-style-type: none"> 1. Epi Info. -176 p. 2. Gordis, Leon, Epidemiology, 5th Edition, W.B. Saunders Company, 2013, p.55-61, p.371-376 3. Principles of Epidemiology in Public Health Practice, 3d Edition, CDC, US Department of Public Health, 2012. Lesson 5. 4. CAPABILITY 13: Public Health Surveillance and Epidemiological Investigation. Public Health Preparedness Capabilities:
8	Summarizing data: Properties and methods of Frequency Distributions. Measures of Central Location and spread.	Data, database. Mean, median and mode. Central location, types. Types of variables. Types of distribution, descriptive statistics. Databases (Excel, SPSS).	<ol style="list-style-type: none"> 1. Fundamentals of Biostatistics. Seventh Edition. Rosner. - 2016.-856 p. 2. Primer of Biostatistics. Seventh Edition. Stanton A. Glantz, Ph.-2009.-297p. 3. Medical Statistics at a Glance Workbook. Front Cover. Aviva Petrie, Caroline Sabin. John Wiley & Sons, 2013 - Medical - 120 p. 4. SPSS Survival Manual 6th edition. Julie Pallant - 2016
9	Types of statistical hypotheses. Hypothesis testing. P-value. Standard error and confidence interval.	Types of statistical hypotheses. Hypothesis testing. P-value. Standard error and confidence interval.	<ol style="list-style-type: none"> 1. Fundamentals of Biostatistics. Seventh Edition. Rosner. - 2016.-856 p. 2. Primer of Biostatistics. Seventh Edition. Stanton A. Glantz, Ph.-2009.-297p. 3. Medical Statistics at a Glance Workbook. Front Cover. Aviva Petrie, Caroline Sabin. John Wiley & Sons, 2013 - Medical - 120 p. 4. SPSS Survival Manual 6th edition. Julie Pallant - 2016

10	Biostatistics: Descriptive statistics. Databases (Excel, SPSS).		
11	Introduction to analytical statistics. Methods for analyzing qualitative variables, independent and related samples (Chi-square test. Fisher's exact test, McNemar's test).	Methods for the analysis of qualitative variables, independent and related samples (Chi-square test. Fisher's exact test, McNemar's test).	<ol style="list-style-type: none"> 1. Fundamentals of Biostatistics. Seventh Edition. Rosner. - 2016.-856 p. 2. Primer of Biostatistics. Seventh Edition. Stanton A. Glantz, Ph.-2009.-297p. 3. Medical Statistics at a Glance Workbook. Front Cover. Aviva Petrie, Caroline Sabin. John Wiley & Sons, 2013 - Medical - 120 p. 4. SPSS Survival Manual 6th edition. Julie Pallant - 2016
12	Parametric Tests (T-tests, ANOVA).	One-sample t-test, Two-sample t-test and Paired t-test., One-way ANOVA.	<ol style="list-style-type: none"> 1. Fundamentals of Biostatistics. Seventh Edition. Rosner. - 2016.-856 p. 2. Primer of Biostatistics. Seventh Edition. Stanton A. Glantz, Ph.-2009.-297p. 3. Medical Statistics at a Glance Workbook. Front Cover. Aviva Petrie, Caroline Sabin. John Wiley & Sons, 2013 - Medical - 120 p. 4. SPSS Survival Manual 6th edition. Julie Pallant - 2016
13	Non-parametric Tests (Mann-Whitney U-test, Wilcoxon U-test, Kruskal-Wallis Test, Friedman Test.	Mann-Whitney U-test, Wilcoxon U-test, Kruskal-Wallis Test, Friedman Test.	<ol style="list-style-type: none"> 1. Fundamentals of Biostatistics. Seventh Edition. Rosner. - 2016.-856 p. 2. Primer of Biostatistics. Seventh Edition. Stanton A. Glantz, Ph.-2009.-297p. 3. Medical Statistics at a Glance Workbook. Front Cover. Aviva Petrie, Caroline Sabin. John Wiley & Sons, 2013 - Medical - 120 p. 4. SPSS Survival Manual 6th edition. Julie Pallant - 2016
14	Correlation (Pearson and Spearman) and regression. Survival analysis Log-rank test.	Correlation. Pearson's correlation coefficient. Spearman's rank correlation coefficient. The sensitivity of the correlation coefficient. Survival curve.	<ol style="list-style-type: none"> 1. Fundamentals of Biostatistics. Seventh Edition. Rosner. - 2016.-856 p. 2. Primer of Biostatistics. Seventh Edition. Stanton A. Glantz, Ph.-2009.-297p. 3. Medical Statistics at a Glance Workbook. Front Cover. Aviva Petrie, Caroline Sabin. John Wiley & Sons, 2013 - Medical - 120 p. 4. SPSS Survival Manual 6th edition. Julie Pallant - 2016
15	Presentation of research work in a thesis	Planning and organization of scientific research. Definition of the research topic, aim and objectives. Formulation of Hypothesis. Definition of research methods. Developing of a questionnaire/patient card. Data collection. Enter data in the SPSS database. Choosing statistical tests and data analysis. Creating tables, formation of conclusions. Graphical representation of data. Preparing a presentation.	<ol style="list-style-type: none"> 1. Radaev V.V. How to organize and present a research project: 75 simple rules. - M.: SU-HSE: INFRA-M, 2011 - 203 p. 2. Ospan E. Academic writing: the basics of writing a research paper., Almaty, 2020.-231 p.

№	Criterion (point-rating assessment)	25-30%	20-20%	15-20%	0-15%
		<i>perfect</i>	<i>good</i>	<i>satisfied</i>	<i>unsatisfied</i>
1	Basic knowledge of Epidemiology, Evidence-based Medicine and Biostatistics.	In-depth knowledge of epidemiology and evidence-based medicine. Demonstrated original thinking. Independently used additional literature. Use descriptive and inferential statistics in research. Good at academic writing.	Good knowledge of epidemiology and EBM. Demonstrated standard thinking and use of descriptive and inferential statistics. Good at academic writing.	Knows the bases of epidemiology and EBM. Demonstrated standard thinking. Use descriptive statistics. Good at academic writing.	Low level of knowledge in Epidemiology and EBM. Demonstrated low reasoning. Understanding his mistakes and willingness to correct them. Not good at academic writing.
2	Knowledge of research design in Epidemiology.				
3	Knowledge of the epidemiology of communicable and non-communicable diseases.				
4	Knowledge of searching and critically analyzing publications.				
5	Planning and organization of research.				
6	Knowledge and skills in descriptive and inferential methods of Biostatistics.				
7	Knowledge and skills in academic writing.				

Point-rating assessment of the student's independent work under the guidance of a teacher (maximum, 50 points)

№	Evaluation criteria	10 points	8 points	6 points	4 points
1.	Completeness and accuracy.	Completes the assignment completely. Applies critical thinking and analysis skills in completing the assignment. Effective presentation of data.	Completes the task with some inaccuracies. Shows standardized thinking and reasoning. Applies analysis skills. Good presentation of data.	Completion of the task with significant errors. Understands his/her mistakes and is ready to correct them. Weak analysis skills.	Failure to complete the assignment. Does not show scientific thinking and practical skills. Weak skills in analyzing and presenting the assignment.
2.	Critical thinking				
3.	Analytical skills				
4	Presentation of the assignment				