Methodology and methods of sociological research in the digital age

Working program of the academic discipline (Syllabus)

Requisites of the academic discipline

Level of Higher Education	The Second (master's level)
Field of Knowledge	C Social Studies, Journalism, Information and International Relations
Speciality	C5 Sociology
Educational Program	Social Data Analitics
Status of Discipline	Normative
Form of Learning	Full-time
Year of Education, Semester	1 year, 1 semester
ECTS	5,0 credits
Form of Control	Exame / MKR/ PGR
Schedule	http://roz.kpi.ua/
Language	English
Information about course leader / teachers	Lecturer: Igor Pygolenko, PhD, associate professor, e-mail: pigolenko@gmail.com Practical Classes: Igor Pygolenko, PhD, associate professor, e-mail: pigolenko@gmail.com
Course placement	Link to remote Moodle resource: https://do.ipo.kpi.ua/course/view.php?id=6890

Curriculum of the discipline

1. Description of the discipline, its purpose, subject of study and learning outcomes

During the study of this discipline students will be able to get acquainted with the methodological aspects of preparing a program of sociological research, will consider the theoretical and methodological foundations of the sample survey method, which aims to provide students with knowledge about methods of collecting information in quantitative and qualitative sociological research, stages of programming and implementation of empirical sociological research, as well as techniques that ensure the reliability of primary sociological information. The course also involves the formation of practical skills for program development and the formation of tools for sociological research, quality control of the project at the stage of data collection.

Communication with the teacher is possible and will be encouraged in the classroom, as well as in consultation with the teacher, which are held according to the schedule available on the website of the department.

Interdisciplinary links: knowledge gained by students in the course "Methodology and methods of sociological research in the digital age" can be used not only in the study of specialized disciplines, but also in practice.

In accordance with the requirements of the EPP, the purpose of the discipline is to form students' abilities:

● Ability to abstract thinking, analysis and synthesis. (ЗК 01);
● Ability to identify, diagnose and interpret social problems of Ukrainian society and the world community. (ФК 02);
● Ability to design and conduct sociological surveys, develop and justify their methodology (ФК 03);
● Ability to collect and analyze empirical data using modern methods of sociological survey (ФК 04).
● Ability to adhere to the norms of professional ethics of a sociologist and to be guided by universal values (ФК 06).

According to the requirements of the EPP, as a result of mastering the discipline, students will be able to:

- Carry out diagnostics and interpretation of social problems of the Ukrainian society and the world community, the reasons of their occurrence and consequences. (ПР 02);
- Apply scientific knowledge, sociological and statistical methods, digital technologies, specialized software to solve complex problems of sociology and related fields of knowledge (ПР 04);
- Solve ethical dilemmas in accordance with the norms of professional ethics of the sociologist and universal human values (ПР 07);
- To plan and conduct research in the sphere of sociology, to analyze the results, to defend the conclusions (ПР 09).
- Summarize the results of one's own research and present them in academic reports and publications (ПР 11);
- Apply the latest modern methods of sociological surveys in the conditions of digitalization of social relations (ПР 13).

2. **Pre-requisites and post-requisites of the discipline (place in the structural and logical scheme of training according to the relevant educational program)**

To study the discipline, it is desirable for the student to have skills in using the Word text editor.
Post-requisites: 3О06 Introduction to Analytical Sociology

3. **Content of the academic discipline**

Names of sections and topics	Number of hours			
	Total	including		
		Lectures	Seminary	IWS
1	2	3	4	6
Modul 1 Program of sociological research: theoretical and methodological section				
Topic 1. The program of sociological research, as a scientific document.	7	2	2	3
Topic 2. The program of sociological research. Problem, object and subject of research.	7	2	2	3
Topic 3. The program of sociological research. Research goals, objectives and hypotheses.	7	2	2	3
Topic 4. The program of sociological research. Interpretation and operationalization of the main concepts.	7	2	2	3
Total Modul 1	28	8	8	12
Modul 2 Program of sociological research: procedural and methodological section				
Topic 5. Classification of sociological information collection methods	7	2	2	3
Topic 6. Measurement in sociology.	7	2	2	3
Topic 7. Toolkit of sociological study	7	2	2	3
Topic 8. Basic research plan.	5	0	2	3
Topic 9. Organization of a sociological study.	7	2	2	3
Total Modul 2	33	8	10	15
Modul 3 Theoretical foundations of sampling				
Topic 10. Basic concepts and essence of the selective method	7	2	2	3
Topic 11. Types and methods of sampling	5	0	2	3

Topic 12. Sample passport	5	0	2	3
Together by section 3	17	2	6	9
Modul 4 Methodological bases of sampling				
Topic 13. Probability (random) sampling methods	5	0	2	3
Topic 14. Methods of non-probability (non-random) sampling	5	0	2	3
Topic 15. Multistage sampling	5	0	2	3
Total Modul 4	15	0	6	9
Modul 5 Peculiarities of sampling in the empirical study				
Topic 16. Calculation of the sample size. Sampling error	5	0	2	3
Topic 17. Control and repair of the sample	4	0	1	3
Topic 18. Representativeness of the sample	4	0	1	3
Total Modul 5	13	0	4	9
PGR	8	0	0	8
MKW	6	0	2	4
Exam Preparation	30	0	0	30
Total hours	**150**	**18**	**36**	**96**

4. Training materials and resources

To successfully study the discipline, it is enough to study the educational material taught in lectures, as well as to familiarize yourself with the literature.

1.1. Basic literature:

1. Дизайн дослідження: підходи на основі якісних, кількісних і змішаних методів / Перекл. Ігор Кобель, Тарас Кобель. Львів: Видавництво Українського католицького університету, 2022. 284 с.
2. Комплексні вимірювальні інструменти в соціологічних дослідженнях: розроблення, адаптація, обґрунтування достовірності [Є. Головаха, С. Дембіцький, Н. Паніна та ін.]; за наук. ред. Є. Головахи та С. Дембіцького. Київ. Інститут соціології НАН України. 2022. 405 с.
3. Лупан І. В. Вибіркові обстеження у психології, соціології та педагогіці : навчальний посібник. Кропивницький : В.Ф. Лисенко, 2019. 191 с.
4. Сидоров М. В. Математика для соціологів : навчальний посібник. Київ : Каравела, 2019. 420 с.
5. Туленков М. В. Теорія систем і системний аналіз у соціології : підручник. Київ : Каравела, 2020. 595с.

1.2. Other literature

1. Бірюкова, М. В. Мобільні месенджери як технології сучасної self-взаємодії у фокусі цифрової соціології / М. В. Бірюкова // Вісник НТУУ «КПІ». Політологія. Соціологія. Право : збірник наукових праць. 2019. № 4 (44). С. 8–12.
2. Богдан О. Що варто знати про соціологію та соціальні дослідження? : посібник-довідник для громадських активістів та всіх зацікавлених. Київ : Дух і Літера, 2015. 376 с.
3. Гаврилюк, О. П. (2023). Аналіз рейтингів соціальних мереж у світі та Україні. Молодий вчений. https://molodyivchenyi.ua/omp/index.php/conference/catalog/download/56/895/1869-1
4. Горбачик А.П. Аналіз даних соціологічних досліджень засобами SPSS: Навч. пос. / А.П.Горбачик, С.А.Сальнікова. – Луцьк: Вежа; Волин. нац. ун-т ім. Лесі Українки, 2008. – 164 с.
5. Дубас, М. О. (2023). Війна, пандемія COVID-19 та методології досліджень онлайн у соціології: дослідницькі виклики і сучасні тренди Постановка проблеми. Актуальні проблеми філософії та соціології, 138-143. http://www.apfs.nuoua.od.ua/archive/40_2023/40_2023.pdf#page=138
6. Кислова О.М., Кузіна І.І. Методи аналізу та комп'ютерної обробки соціологічної інформації. Харків : Вид-во ХНУ імені В.Н.Каразіна, 2020. 165 с. https://core.ac.uk/download/pdf/420735720.pdf
7. Кислова, О. М. (2019). Великі дані в контексті дослідження проблем сучасного суспільства. Вісник ХНУ імені ВН Каразіна. Серія «Соціологічні дослідження сучасного суспільства: методологія, теорія, методи, (42), 59-68. https://www.researchgate.net/profile/Olga-Kislova-

2/publication/339229081_Veliki_dani_v_konteksti_doslidzenna_problem_sucasnogo_suspilstva/links/5e44f19c92851c7f7f341c82/Veliki-dani-v-konteksti-doslidzenna-problem-sucasnogo-suspilstva.pdf

8. Негрей М., Гнот Т. Аналітика 3 R : навчальний посібник Київ : Ямчинський О.В., 2020. 236 с.

9. Пиголенко, І. В. Забезпечення якості польового етапу дослідження при проведенні соціологічних опитувань / Пиголенко І. В. // Вісник НТУУ «КПІ». Політологія. Соціологія. Право : збірник наукових праць. 2021. № 2 (50). С. 22-27.

10. Чередніченко О. Ю. Дослідження профілів користувачів соціальних мереж / О. Ю. Чередніченко, В. В. Ткаченко, М. А. Вовк, О. О. Масихнович // Збірник наукових праць Харківського національного університету Повітряних Сил. 2018. № 2. С. 113-119. – Режим доступу: http://nbuv.gov.ua/UJRN/ZKhUPS_2018_2_18

11. Яковлєв М. В. & Дубас, М. О., Купка, О. В. (2023). Цифрова соціологія та постінформаційне суспільство: методологічні виклики й дослідницькі перспективи. Габітус, (55), 33-38. http://habitus.od.ua/journals/2023/55-2023/5.pdf

12. Au, A. (2018). Sociology and science: The making of a social scientific method. The American Sociologist, 49(1), 98-115. https://link.springer.com/article/10.1007/s12108-017-9348-y

13. Edelmann, A., Wolff, T., Montagne, D. & Bail, C.A. (2020). Computational Social Science and Sociology, (46), 61-81. https://www.annualreviews.org/content/journals/10.1146/annurev-soc-121919-054621

14. Gallup G.H. The Gallup poll: Public opinion, 1972-1977 / 2 Vols. Wilmington: Scholarly Resources, 1978.

15. Hall, N. A. (2022). Understanding Brexit on Facebook: Developing close-up, qualitative methodologies for social media research. Sociological Research Online, 27(3), 707-723. https://journals.sagepub.com/doi/full/10.1177/13607804211037356

16. Luo, J. D., Liu, J., Yang, K., & Fu, X. (2019). Big data research guided by sociological theory: a triadic dialogue among big data analysis, theory, and predictive models. The Journal of Chinese Sociology, 6(1), 11. https://scholar.google.com/scholar?output=instlink&q=info:MCWQUdqkw8cJ:scholar.google.com/&hl=en&as_sdt=0,5&scillfp=13539162575221047244&oi=lle

17. Macanovic, A. (2022). Text mining for social science–The state and the future of computational text analysis in sociology. Social Science Research, 108, 102784. https://www.sciencedirect.com/science/article/pii/S0049089X22000904

18. Manago, B. (2023). Preregistration and registered reports in sociology: Strengths, weaknesses, and other considerations. The American Sociologist, 54(1), 193-210. https://link.springer.com/article/10.1007/s12108-023-09563-6

19. Menshikova, A., & van Tubergen, F. (2022). What drives anti-immigrant sentiments online? a novel approach using twitter. European Sociological Review, 38(5), 694-706. https://academic.oup.com/esr/article/38/5/694/6523885

20. Naresh Malhotra Marketing Research: An Applied Orientation, Georgia Institute of Technology, 2019.

21. Seymour Sudman, Norman Bradburn Asking Questions: A Practical guide to Questionnaire Design, San Francisco, Jossey-Bass Publishers, 1982.

22. Tong, G., & Guo, G. (2022). Meta-analysis in sociological research: Power and heterogeneity. Sociological Methods & Research, 51(2), 566-604. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9231456/

Educational content

5. Methodology for mastering the academic discipline (educational component)

Lectures

No	Name of the subject of the lesson and list of main questions
1	**Topic 1. The program of sociological research, as a scientific document.** Stages and procedures of sociological research. The program of sociological research is the main document that includes the prerequisites for scientific research. The program as an organizational basis of research. The main types of sociological research (theoretical-applied and applied). The specifics of building the program depending on its type. Sections of the program. Internal and external functions of the program. **IWS:** What are the main types of empirical research. What is their specificity? What are the methodological and methodical functions performed by the outline and program of sociological research? Draw a diagram of the structure of the sociological research program.
2	**Topic 2. The program of sociological research. Problem, object and subject of research.** Problem formulation is the starting point of program development. Theoretical and applied problems. The main requirements for the deployment of the research problem. Object and

	subject of research, their purpose. Requirements for the object of research. Research object and observation units. The concept of typology. **IWS:** What main elements should a sociological research program contain? What is a social indicator? What is a "problem"? Name the main characteristics of a production problem. How the object and the subject of sociological research are related. Give an example of this relationship.
3	**Topic 3. The program of sociological research. Research goals, objectives and hypotheses.** Proposing the goals of the research as an orientation to its final result. Theoretical, applied and practical research goals. Objectives of the study. Consistent presentation of program tasks depending on the main goal of the research. Methodical tasks. Hypothesis is the main methodological tool of sociological research. The source of the formulation of the hypothesis. Logical structure of the hypothesis and principles of its construction. Types of hypotheses in sociological research. The main hypothesis and consequential hypotheses. Descriptive and explanatory hypotheses. Justification and the possibility of empirical testing of hypotheses. Dependence of the type of sociological research on the hypothesis. General requirements for the hypothesis. **IWS:** What is a "hypothesis" in sociology? What types of hypotheses do you know? Formulate the purpose, tasks and hypotheses of a sociological study of crime and its main causes.
4	**Topic 4. The program of sociological research. Interpretation and operationalization of the main concepts.** Highlighting the main concepts of the study. Interpretation of concepts as a procedure for their explanation, clarification of their content, which makes up the conceptual scheme of the study. Types of interpretation of the main concepts (theoretical, empirical, operational). The essence of interpretation, the main procedures. Normative requirements for interpretation procedures. Preliminary system analysis of the research object. **IWS:** What is the essence of theoretical interpretation and operationalization of concepts? How are these concepts related? Give an example of a multi-level interpretation of the concept of "attitude of young people towards private entrepreneurship".
5	**Topic 5. Classification of sociological information collection methods** Classification of sociological information collection methods. Criteria for the classification of sociological research methods. The relationship between the purpose of the research and the methods. Quantitative methods in sociology: their advantages and limitations. Sociological surveys and their varieties: postal surveys, telephone surveys, individual and group surveys; expert surveys; monitoring surveys as a type of public opinion study; express survey. Content analysis as a quantitative method of sociological research. Qualitative methods in sociology and their areas of application. The method of focus groups. In-depth (in-depth) interview. Sociological experiment. The observation method and its features. Test methods. Cognitive capabilities of each of the methods. **IWS:** Name the qualitative methods of sociological research. How do you understand the concept of "representativeness"? What role does it play in sociology? What methods of sociological research did sociology borrow from the natural sciences? Name and describe them. Who owns and what is the idea of using an experiment in the social sciences? How are the strategic and working plans of sociological research related to each other? What are the main blocks of the work plan of sociological research? When and in what cases are qualitative methods of sociological research used?
6	**Topic 6. Measurement in sociology.** Search and construction of a measurement standard. Verification of primary measurement procedures for reliability. Characteristics of the main scales (nominal, ordinal, interval, ratio). Guttman and Thurstone scales. Limitations of quantification of primary social characteristics. **IWS:** Give an example of a nominal scale. What mathematical transformations are possible when using nominal scales? What is the difference between the concepts of "variable" and "attribute"?
7	**Topic 7. Toolkit of sociological study** Logical and organizational structure of the questionnaire. Classification of questionnaire questions. General and partial questions. Application of filter questions. Questions in the form

		of tables. Contact and buffer questions. The main functions of the question (indicative, communicative and measuring). Appeal to the respondent and instructions for filling out the questionnaire. Demographic block of the questionnaire. Types and prevention of errors associated with violation of the logical structure of the question (suggestion effect, inconsistency of the respondent's awareness, trending questions, inadequacy of addressee designation). The watering can rule. Requirements proposed for questionnaire questions. Problems that arise when conducting a survey (the problem of those who did not answer, the problem of insincerity of respondents, the problem of "poor quality of the field", ethical problems). Composition and technical design of the questionnaire. Graphic design. Piloting of the questionnaire. **IWS:** What is the requirement for the unambiguity of the questionnaire questions? Briefly describe the main formulation errors. What is the meaning of filter questions? List the advantages and disadvantages of open-ended questions.
8		**Topic 8. Organization of sociological research.** Problems of harmonizing scientific-theoretical, methodical and organizational-technical procedures with research goals. Sequence of research procedures and coordination of activities of its participants. The main regulatory requirements for the organization of sociological research. Plan of research work. Network graph. Stages and procedures: preparatory, operational, resulting. Stages of research tool design. Instructions for field workers. Stages of preparation of performers. Qualities of knowledge, skills necessary for performers. Typical difficulties and mistakes in the organization of applied research. Task on SRS: Describe the stages of the work plan of a sociological study of the problems of a young family.
9		**Topic 9. Basic concepts and essence of the sampling method.** Concept of sampling. A selective study of the concept of the general and selective population. Representativeness of the sample. Parameters of the general and sample population. Sampling methods. Sample structure. **IWS**: Define the concepts of "general population", "sample population", "representativeness". How are the concepts of "reliability" and "validity" related?

<p align="center">Seminar (practical) classes</p>

The main tasks of the seminar (practical) class cycle:

to form in students:

- about the place and role of sociological research in sociological science, the specifics of the subject and method of sociological research;
- about the structure of the sociological research program as a document that regulates the norms and logic of empirical knowledge;
- formulating the problem, defining the object and subject of the study, its goals and objectives;
- about writing a strategic research plan;
- about preparing sociological research tools;
- about ways to build conceptual and operational models of sociological research as the basis for formulating research hypotheses;
- about the features of the process of forming a sample taking into account the formulation of the problem, defining the object and subject of the study, its goals and objectives, strategic plan, and choosing the main method of collecting primary sociological information.

No	Name of the subject of the lesson and list of main questions
	Chapter 1 Program of sociological research: theoretical and methodological section
1	**Topic 1.1. The program of sociological research, as a scientific document.** 1. Sociological research program: essence, functions. 2. The main types of sociological research. 3. The specifics of building the program depending on the type of sociological research. 4. Main sections of the program. **IWS:** What are the main types of empirical research. What is their specificity? What are the methodological and methodical functions performed by the outline and program of sociological research?

	Draw a diagram of the structure of the sociological research program.
2	**Topic 1.2. Program of sociological study of conflicts. Problem, object and subject of research.** 1. Problem situation and problem. 2. The main requirements for formulating the research problem. 3. Theoretical and applied problems. 4. Subject of research. 5. Object of research. Measurement object and object measurement. 6. Units of observation. **IWS:** What main elements should a sociological research program contain? What is a social indicator? What is a "problem"? Name the main characteristics of a production problem. How the object and the subject of sociological research are related. Give an example of this relationship.
3	**Topic 1.3. Program of sociological study. Research goals, objectives and hypotheses.** 1. Theoretical and applied research goals. 2. Research task. 3. Hypotheses: logical structure, construction principles. 4. Types of hypotheses in sociological research. 5. Main requirements for hypotheses. **IWS:** What is a "hypothesis" in sociology? What types of hypotheses do you know? Formulate the purpose, tasks and hypotheses of a sociological study of crime and its main causes.
4	**Topic 1.4. The program of sociological research. Interpretation and operationalization of the main concepts.** 1. Highlighting the main concepts. 2. Interpretation of concepts: the essence of the procedure. 3. Types of interpretation and their functions. 4. Theoretical interpretation of the main concepts. 5. Typical errors of theoretical interpretation. 6. Empirical interpretation. 7. Operationalization of the main concepts. 8. The concept of "indicator" in sociology. **IWS:** What is the essence of theoretical interpretation and operationalization of concepts? How are these concepts related? Give an example of a multi-level interpretation of the concept of "attitude of young people towards private entrepreneurship".
	Chapter 2 Program of sociological research: procedural and methodological section
5	**Topic 2.1. Classification of sociological information collection methods** 1. Classification of sociological information collection methods: qualitative and quantitative paradigms. 2. Quantitative methods in sociology: their advantages and limitations. 3. Qualitative methods in sociology and areas of their application. 4. Methods of collecting sociological information and their characteristics. IWS: The specifics of scientific observation. A social experiment. Analysis of documents: regulatory requirements, types of documents. Content analysis: status and prospects.
6	**Topic 2.2. Measurement in sociology.** 1. Measurement in sociology: features of application. 2. Reliability of measurement. 3. Types of scales and their characteristics. 4. Guttman and Thurstone scales. **IWS:** Give an example of a nominal scale. What mathematical transformations are possible when using nominal scales? What is the difference between the concepts of "variable" and "sign"?
7	**Topic 2.3. Toolkit of sociological stud.** 1. Logical and organizational structure of the questionnaire. 2. Classification of questionnaire questions. 3. General and partial questions. 4. Application of filter questions. 5. Questions in the form of tables. 6. Contact and buffer issues.

	7. The main functions of the question (indicative, communicative and measuring).
	8. Appeal to the respondent and instructions for filling out the questionnaire.
	9. Demographic block of the questionnaire.
	10. The watering can rule.
	11. Requirements proposed for questionnaire questions.
	IWS: What is the requirement for the unambiguity of the questionnaire questions? Briefly describe the main formulation errors. What is the meaning of filter questions? List the advantages and disadvantages of open-ended questions.
8	**Topic 2.4. Principle** of **sociological research plan.**
	1. Sociological research plan: essence and functions.
	2. Types of sociological research plans.
	3. Main requirements for building a sociological research plan.
	IWS: What are the main blocks of the work plan of sociological research? You have to conduct a sociological study of students' attitudes to learning. Which strategic plan option will you choose and why?
9	**Topic 2.5. Organization of sociological research.**
	1. Main requirements for research organization.
	2. Research network schedule.
	3. Typical mistakes in research organization.
	IWS: Describe the stages of the work plan of a sociological study of the problems of a young family.
	Chapter 3 Theoretical foundations of sampling
10	**Topic 3.1. Basic concepts and essence of the sampling method.**
	1. Concept of sampling.
	2. Selective study of the concept of the general and selective population.
	3. Representativeness of the sample.
	4. Parameters of the general and sample population.
	5. Sampling methods.
	6. Sample structure.
	IWS: How are the concepts of "reliability" and "validity" related?
11	**Topic 3.2. Sampling types and methods**
	1. A representative statistical sample.
	2. Target sampling.
	3. Random (unrepeated and repeated) sampling.
	4. Multi-stage sampling.
	5. Quota sampling.
	6. District sampling.
	7. Serial sampling.
	8. Probability sampling.
	9. Systematic sampling.
	10. Nested sampling.
	11. Methods of selection.
	IWS: What are the types of samples? Describe the main methods of selection that determine the type of sample.
12	**Topic 3.3. Sample passport**
	1. Ways of describing the sample in scientific publications.
	2. Empirical research object.
	3. Number of stages of selection and units of selection.
	4. Sampling parameters.
	5. Sampling basis.
	6. Description of aerobatic instrumentation.
	IWS: Describe the structure of the process of forming a sample population. Can selection units act as observation units?
	Chapter 4 Methodological bases of sampling

13	**Topic 4.1. Probability (random) sampling methods**
	1. The concept of probability (random) sampling.
	2. Methods of forming a probability sample.
	3. Simple random selection.
	4. Systematic selection.
	5. Cluster selection.
	6. Stratified selection.
	IWS: What is the essence of the principle of zoning? How does the cluster (nest) method of preliminary object classification differ from zoning (stratification)?
14	**Topic 4.2. Methods of non-probability (non-random) sampling**
	1. The concept of non-probability (non-random) sampling.
	2. Types of non-random sampling.
	3. Quota sampling.
	4. The snowball method.
	5. The main array method.
	6. Method of spontaneous selection.
	7. Types of non-probability selection.
	8. Target selection.
	9. Spontaneous selection.
	IWS: List the most common types of purposive sampling approach.
15	**Topic 4.3. Multistage sampling**
	1. The concept of multistage sampling.
	2. The procedure for building a multi-stage sample.
	3. Method of systematic selection.
	4. Unit of selection.
	5. Ideal and real aggregates.
	6. Conceptual and designed object.
	7. Sampling error.
	8. Types of errors - random and systematic.
	IWS: What is the route method? Give an example of multistage random sampling.
	Chapter 5 Peculiarities of sampling in the empirical study
16	**Topic 5.1. Calculation of the sample size. Sampling error**
	1. Sample size.
	2. Types of samples: small, ultra-small sample.
	3. Factors affecting the sample size.
	4. Strategy of preliminary calculation.
	5. Strategy of sequential calculation.
	6. Combined strategy.
	7. Confidence interval.
	8. Confidence probability.
	9. Concept of sampling error.
	10. Error of representativeness.
	11. General characteristics of sampling error.
	12. Random and systematic errors.
	13. Ways to avoid sampling errors.
	IWS: How do random errors differ from systematic ones? What is representativeness error?
17	**Topic 5.2. Control and repair of the sample**
	1. Concept of sample control and repair.
	2. Correction of the sample population.
	3. Correction of distributions of demographic characteristics.
	4. Weighting of upstream data.
	5. Correction of sharply selected answers of respondents.
	6. Correction of missed answers.
	IWS: What methods are used to correct the sample population? Weighting as a way of forming the

	conformity of the sample population to the general population.
18	**Topic 5.3. Representativeness of the sample** 1. Comparison of the average indicators of the distributions of the sample and general population. 2. Comparison of forms of distribution of indicators. 3. Calculation of dispersion, mode, median and normal distribution. 4. Indicators of dispersion in the general and sample population. 5. Errors of representativeness. 6. The impact of representativeness errors on the results of a scientific report. **IWS:** What should the author of the sampling project first of all take into account when determining the minimum volume of the sample population?

6. Independent work of student

The applicant's independent work includes:

preparation for classroom lessons – 52 hours;

preparation for RGR – 10 hours;

preparation for modular control work – 4 hours;

preparation for the exam – 30 hours.

Total – 96 hours.

Questions for students' independent work are prescribed for each lecture and practical task.

Policy and Control

7. Discipline Policy (Educational Component)

Attendance and Assignment Completion

For students who wish to demonstrate excellent learning results, active work in lecture classes is necessary, but it is not necessary to make up for missed lectures.

Students will be required to actively participate in seminar classes. The student's rating will largely be formed based on the results of his work in practical (seminar) classes. Each missed practical session (regardless of the reasons for the absence) lowers the final rating of the student in the discipline. There is no specific number of missed seminar classes, which will require the student to independently study the relevant topics (tasks) and additional communication on this matter with the teacher. At the same time, a student who missed practical classes may receive a low rating, which will not allow such a student to be admitted to the credit (in the case of 2 non-certifications). In this case, topics from missed seminar classes must be studied, and practical tasks must be completed by the student. The control of the student's knowledge (understanding) of the missed topics (fulfillment of tasks) will take place during communication with the teacher according to the consultation schedule or during the test. A student who completes the relevant tasks will receive the corresponding points for the rating depending on the quality of the answers and the performance of creative tasks.

Students who missed practical classes can prevent the reduction of the final rating by timely (during the semester) studying the relevant topics and completing the tasks provided for the missed classes. It is not necessary to wait until the assessment and examination session is approaching for appropriate communication with the teacher. This should be done as soon as the student is ready to demonstrate his knowledge and skills on the missed topics of classes.

Topics and tasks for seminar classes are provided by the Syllabus, available from the student's personal account in the "Moodle" system.

The use of laptops and smartphones is allowed at lectures and seminar classes, but only for purposes determined by the subject of the class and the corresponding thematic task.

During the practical session, the student can use the written notes prepared by him on the topic of the session (or those provided by the task), but expressing a position while reading from a sheet of paper reduces the quality of the answer and the grade.

University policy

Academic integrity

The policy and principles of academic integrity are defined in Chapter 3 of the Code of Honor of the National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute". More details: https://kpi.ua/code. (other necessary information regarding academic integrity)

Norms of ethical behavior
Standards of ethical behavior of students and employees are defined in Chapter 2 of the Code of Honor of the National Technical University of Ukraine "Ihor Sikorskyi Kyiv Polytechnic Institute". More details: https://kpi.ua/code.

8. Types of control and rating system for evaluating learning outcomes (RSE)
Current control: survey on the topic of the lesson, performance of tasks
Calendar control: conducted twice a semester as a monitoring of the current status of meeting the syllabus requirements.
Semester control: assessment

Evaluation and control measures
The student's rating in the discipline consists of points obtained for:
1) answers, solving tasks and supplementing the answers of other students in the discussion process at seminar classes, active participation in the lecture class;
2) completion of an individual task, control papers, writing theses for a conference or science days at the faculty, participation in the All-Ukrainian Olympiad in sociology or political science.
A student receives the highest rating if he actively participates in seminar classes, mostly provides complete and reasoned answers, presents them logically, expresses his own position on debatable issues, presents it clearly and logically.
Proper preparation of a student for a practical session will take an average of 1.5-3 hours.
The teacher evaluates the student's work in each practical session. The final number of points for the work in seminar classes is issued by the teacher in the electronic campus.
Detailed criteria for evaluating the student's learning outcomes are defined in the regulation on RSO in the discipline.
The student can appeal the teacher's assessment by submitting a corresponding complaint to the teacher no later than the next day after the student has been informed of the teacher's assessment. The complaint will be processed according to the procedures established by the university.

Conditions for admission to the semester control (credit) are the availability of at least 40 points per semester.
Table of correspondence of rating points to grades on the university scale:

Scores	Grade
100-95	Excellent
94-85	Very good
84-75	Good
74-65	Satisfactorily
64-60	Enough
Less than 60	Unsatisfactory
Requirements of certification are not met	Not certified

9. Additional information on the discipline (educational component)
Recommendations for students
Within the framework of the academic discipline "Methodology and methods of sociological research in the digital age", lectures and seminars are held, respectively. Lectures are held using presentations on the main terms, concepts, theories, taking into account the topic of the classes. The course provides for familiarization with primary sources and their discussion in seminar classes. The course also provides for the acquisition of practical skills, namely, the preparation of a sociological research program, tools (questionnaires), the formation and calculation of the sample.
A seminar class involves the preparation of speeches by students on specific issues, participation in a discussion, expression of their own opinion, etc. The criteria for evaluating the performance of seminar class tasks

are: logical sequence of the answer; completeness of the disclosure of each question; analytical reasoning in the answer; references to sources; validity of personal conclusions.

When preparing for a seminar, a student should study the lecture material on a certain topic, familiarize himself with additional sources, articles in periodicals. At a seminar, even a well-prepared student should not remain a passive observer, but actively participate in the discussion of the issue. If a student has not familiarized himself with the educational material, he should listen more carefully to the speakers, and, thanks to the information received, try to compensate for the shortcomings of preparation for the lesson. One should not refuse to answer the teacher's questions. Even if a student does not know the answer, it is advisable to try to answer, express his opinion, based on his own knowledge, experience, logic of the question, etc. A responsible attitude to preparation for each seminar allows one to understand the issues that are considered within the framework of the discipline "Methodology and Methods of Sociological Research in the Digital Age".

Extracurricular activities
Students may participate in an informal group for sociologists.

Distance learning
Synchronous distance learning is possible using video conferencing platforms and the university's distance learning educational platform.

Mastering distance courses

At the request of the applicant, in conditions that do not contribute to regular attendance at classes, it is allowed to study individual substantive parts of the educational component in asynchronous mode, in particular, through mastering distance courses. To be taken into account in the scoring system for mastering such courses, they must correspond in content to the syllabus, be agreed with the teacher, and to confirm the completion of the courses, the student must provide an appropriate document indicating the name and volume in hours. Recognition of the results of informal education occurs in the manner specified in the relevant Regulation of Igor Sikorsky Kyiv Polytechnic Institute https://osvita.kpi.ua/node/179.

The working program of the academic discipline (syllabus):

Compiled by Igor Pygolenko, PhD, Associate Professor, Associate Professor of the Sociology Department.

Approved by the Sociology Department (protocol № 12 from 24.05.2024).

Approved by the Methodical Commission of the faculty (protocol № 9 from 26.06.2024).

A rating system for evaluating learning outcomes

Rating of the student in the discipline "Methodology and methods of sociological research in the digital age" consists of points obtained for: reports, answers, solving tasks and supplementing the answers of other students in the process of discussion at seminar classes.

Distribution of study time by types of classes and tasks in the study discipline according to the work study plan

Semester	Academic hours		Allocation of study hours		Control measures				
	Credits	Academic hours	Lectures	Sem.	MKW	Calculation graphic assignments	Ref.	Semester certificate
1	5	150	18	36	1	1	-	exam

Calculation of weight points

RSE in the academic discipline consists of the sum of points for control activities during the semester Rk=100.
Rk consists of points that the student receives for the following types of work:
1) answers in seminar classes;
2) active work in seminar classes;
3) calculation graphic assignments
4) MKW

1. Calculation of weight points

The RSE in the academic discipline consists of the sum of the student's points for all completed control measures during the semester (R_D).

$$\mathbf{R}_D = r_{sem.} + r_{akt} + r_{kga} + r_{mkw} = 54+18+18+10=100 \text{ point.}$$

1. Answers at seminar classes.

Weighted score – 3 points when answering one question. The maximum number of points for all seminar classes is rsem = 3 points*18 = 54 points.

When answering each question, the student receives:

- "excellent", a complete answer (at least 90% of the required information) if the student demonstrates deep knowledge of the material, explains it logically and consistently, gives well-founded conclusions, freely operates with specific data, easily and convincingly answers the questions - 3 points ;

- "good", a sufficiently complete answer (at least 75% of the required information), or a complete answer with minor inaccuracies, answers most of the questions - 2 points;

– "satisfactory", incomplete answer (at least 60% of the required information) and significant errors, answers the questions poorly or does not answer at all - 1 point;

- "unsatisfactory", no work at the seminar - 0 points.

2. Activity of work in seminar classes.

The weighted point is 2. The maximum number of points for 50% of practical classes is equal to 1 points*18 = 18 points.

The student actively participates in the discussed questions of the topic of the practical lesson - 1 points.

The student does not take part in the discussed questions of the topic of the practical lesson - 0 points.

3. Calculation graphic assignments
Weight score – 18.
Evaluation criteria:
• "excellent", the topic is fully disclosed (at least 90% of the required information), the work is written independently, meets the established requirements and is submitted on time - 16 - 18 points;

• "good", the topic is not fully disclosed (at least 75% of the required information), there are minor deviations from the established requirements, submitted on time - 13 - 15 points;

• "satisfactory", the topic is poorly explained and/or there are significant deviations from the established requirements and/or the work is submitted with a significant delay - 9 - 12 points;

• "unsatisfactory", the work does not meet the requirements for 9 points - 0 points.

4. Modular control work

Weight score is 10.

Evaluation criteria:

● "excellent", a complete answer (at least 90% of the required information) to all questions of the modular control work; the student freely navigates the presented material - 9-10 points;

● "good", the student provided answers to 75% of the questions of the modular test; answers to all test questions need clarification - 7-8 points;

● "satisfactory", the student provided answers to 60% of the questions of the modular test; answers need significant clarification, insufficient mastery of the material - 5-6 points;

● "unsatisfactory", the answer does not meet the requirements for 5 points, the student is not oriented in the material, an extremely limited answer - 0 points.

Incentive points (no more than 10 points for all types of work):

● for scientific and research activities (participation in conferences, "Days of Science of the FSP", contests of student works, publications);

● participation in faculty olympiads in the academic discipline and all-Ukrainian olympiads.

2. The procedure for attestation and credit control

According to the results of educational work in the first 8 weeks, the "ideal" student should score 20 points. At the first certification, the student receives "credited" if his current rating is 20 or more points. On the second certification, the student receives "enrolled" if his current rating is 40 or more points. The sum of the starting component of the rating is 40 points. A necessary condition for admission to the credit is the enrollment of all tasks at the seminars, as well as the MKR.

To draw up an attestation for an academic discipline, each teacher uses a accumulative report, in which points are entered for all types of classroom and independent tasks completed by the student (practical classes, MKR, express control, etc.). Rating points are entered in the border control information (1st, 2nd attestation) and credit.

In the event that this indicator does not meet the requirements, the attestation information displays "not attested".

Admission to the test takes place for the value of Re>40 points. When receiving less than 40 points, the student must complete additional work in the form of writing and defending work on a topic assigned by the teacher.

The assessment has the form of a list of questions to which the student must answer. The questions are different in content, correspond to the topics of lectures, seminars, independent work, self-control questions.

Thus, the student's overall (final) rating is calculated as the sum of actually received points for the specified types of work. The maximum possible total score of a student is 100 points.

In order for the student to receive the appropriate grades (ECTS and traditional), his rating grade (RD) is translated according to the table:

RD	Mark ECTS	Traditional Mark
95 – 100	Perfectly	Perfectly
85 – 94	Very good	Fine
75 – 84	Fine	
65 – 74	Satisfactorily	Satisfactorily
60 – 64	Enough	
RD < 60	Not allowed	Unsatisfactorily

Questions to the calculation graphic assignments

1. Internally displaced persons in host communities: peculiarities of adaptation.
2. Secondary employment of student youth in the conditions of a crisis society.
3. European and national identities of modern Ukrainian youth: possibilities of combination.
4. Migration outside of Ukraine: scope, causes, consequences and ways to overcome it.
5. Religion for today's youth: "tribute to fashion" or the basis of worldview?
6. Level of integration of IDP students at the new place of study.
7. Social capital and economic development: implications for Ukrainian society.
8. Current issues of the activity of elders in Ukraine
9. Labor migration of Ukrainian youth: intentions and ways of implementation.
10. Labor values of modern youth in Ukraine: from a society of work to a society without work?

Questions for the PGP

Prepare the calculation of a representative sample
for a survey of the population of _____ region*

I. Descriptive characteristics of the _____ region
1.1. Characteristics of the administrative-territorial structure of the region
1.2. Demographic features of the region
1.3. National composition of the _____ region
1.4. Language situation of the _____ region
1.5. Social and labor structure
1.6. Social and professional structure
1.7. Economic characteristics of the region

II. Statistical data for calculating a representative sample for a survey of the population of the _____ region.

III. Calculation of the sample for a survey of the population of the _____ region
3.1. Calculation of the sample
3.2. Calculation of the sample for districts
3.2.1. Calculation of the share of each district in the sample
3.2.2. Calculation of the number of units of the sample population for each district
3.3. Quota sampling for districts by age and sex (persons)
3.4. Calculation of the share of rural and urban population in districts
3.4.1 Quota sampling for districts by type of settlement (persons in the sample)
3.5. Quota sampling for cities in districts
3.6. Selection of districts for the survey and development of the route
3.7. Calculation of the cost of the survey for one route (using the example of route I)

* You can choose the region of Ukraine at your discretion and agree with the teacher in order to avoid duplication

Question for exam

1. Social and scientific prerequisites for the emergence of empirical sociology.
2. Sociological research as one of the types of social research.
3. Research organization. Main types of sociological research.
4. The main stages of the research and necessary normative documents.
5. Sociological research program: essence, functions.
6. The main types of sociological research. The specifics of building the program depending on the type of sociological research.
7. The main sections of the sociological research program.
8. Problem situation and problem.
9. The main requirements for formulating the research problem.
10. Theoretical and applied problems.
11. Subject of research.
12. Object of research. Measurement object and object measurement.
13. Units of observation.
14. Theoretical and applied research goals.
15. Tasks of the research.
16. Hypotheses: logical structure, construction principles.
17. Types of hypotheses in sociological research.
18. Main requirements for hypotheses
19. Highlighting the main concepts.
20. Interpretation of concepts: the essence of the procedure.
21. Types of interpretation and their functions.
22. Theoretical interpretation of the main concepts.
23. Typical errors of theoretical interpretation.
24. Empirical interpretation.
25. Operationalization of the main concepts.
26. The concept of "indicator" in sociology.
27. Measurement in sociology: features of application.
28. Reliability of measurement.
29. Types of scales and their characteristics.
30. Guttman and Thurstone scales.
31. Concept of general and selective population.
32. Representativeness of the sample.
33. Units of observation, units of selection.
34. Logical and organizational structure of the questionnaire.
35. Classification of questionnaire questions.
36. General and partial questions.
37. Application of filter questions.
38. Questions in the form of tables.
39. Contact and buffer issues.
40. The main functions of the question (indicative, communicative and measuring).
41. Appeal to the respondent and instructions for filling out the questionnaire.
42. Demographic block of the questionnaire.
43. The watering can rule.
44. Requirements proposed for questionnaire questions.
45. Research plan: essence and functions.
46. Types of plans.
47. Main requirements for building a plan.
48. Main requirements for research organization.
49. Research network schedule.
50. Typical mistakes in research organization.
51. Sample research: concepts of general and sample population.
52. Concept of sampling.
53. Representativeness of the sample.
54. Parameters of the general and sample population.
55. Concept of probability (random) sampling.

56. The concept of non-probability (non-random) sampling.
57. Types of non-probability selection: targeted and spontaneous selection.
58. Multistage sampling.
59. Systematic sampling.
60. Districted sample.
61. Nest sampling.
62. Quota sampling.
63. Directed sampling.
64. The main array method.
65. Methods of estimating the number of closed groups.
66. The method of estimating the population according to the data of national surveys.
67. The method of estimating the number by the "Capture - repetition of capture" method.
68. Method of systematic selection. Selection unit.
69. Ideal and real aggregates.
70. Factors affecting the sample size.
71. Confidence interval and confidence probability.
72. General characteristic of sampling error. Random and systematic errors.
73. Ways to avoid sampling errors.
74. Concept of sample control and repair.
75. Correction of the sample population.
76. Methods of describing the sample in scientific publications.
77. Comparison of the average indicators of the distributions of the sample and general population.
78. The impact of representativeness errors on the results of a scientific report.
79. Concept of reliability, validity of sociological information. Stability of the obtained results.