

Basics of the scientific research

Subjects:	Basics of the scientific research
Level of higher education:	first (undergraduate)
Course page in Moodle:	<i>https://dl.khadi.kharkov.ua/course/view.php?id=2402</i>
The scope of the educational component	4 credits (120 hours)
Final control form	test
Consultations:	on schedule
Name of the department:	department of accounting and taxation
Teaching language:	english
Course leader:	Volodymyr Vasyliovych Malikov, Dr. of Science in Public Administration, professor
Contact phone number:	(050) 5971309
E-mail:	MalikovW@gmail.com

Brief content of the educational component:

The purpose of the educational discipline is to familiarize students with the organization of research and scientific-pedagogical work in higher educational institutions, based on the generalization and systematization of knowledge, skills and abilities acquired in the process of education, to equip them with modern methods of scientific research, formulation of scientific problems, their information support, systematization of research results, methodology of preparation of research works, including master's work, protection and implementation of the results of scientific research, their legal protection, the process of drawing up documents for the right to use the results of intellectual (creative) activity.

The subject of study of the discipline is the theoretical and methodological foundations of scientific research and legal relations in the field of intellectual property law.

Tasks of the academic discipline:

- to acquaint students with the state of scientific and pedagogical activity in higher education institutions, the place and role of science in the state;
- development of students' skills in choosing and justifying the topic of scientific research and methods of its implementation;
- formation of students' abilities and skills of creative work, conducting and design of scientific research, transmission of scientific information and implementation of the results of scientific research;
- mastering the content of the main institutions of intellectual property law;
- study of basic normative acts in the system of intellectual property law.

Prerequisites for studying the educational component:

the study of this discipline does not require special training, the secondary school program is sufficient, in addition: "Philosophy"; "Jurisprudence" (preferred).

Competencies acquired by the acquirer:

General competences:

- ability for abstract thinking, analysis and synthesis;
- ability to learn and master modern knowledge;
- ability to search, process and analyze information from various sources;
- ability to apply knowledge in practical situations;
- ability to work autonomously;
- ability to work in a team;
- ability to be critical and self-critical;
- knowledge and understanding of the subject area and understanding of professional activity;
- the ability to act socially responsibly and consciously.

Special (professional) competences:

- ability to use basic knowledge and practical skills in matters related to scientific activity;
- ability to assess the need for insurance protection taking into account the specifics of the enterprise or organization;
- ability to form and implement communications in the field of scientific activity;
- ability to justify, make professional decisions in the field of scientific activity and take responsibility for them;
- ability to maintain an appropriate level of knowledge and constantly improve one's professional training in the field of scientific activity.

Learning outcomes according to the educational program:

- know and understand economic categories, laws, causal and functional relationships that exist between processes and phenomena at different levels of economic systems;
- to understand the principles, methods and tools of state and market regulation of scientific activity;
- apply acquired theoretical knowledge to solve practical tasks and meaningfully interpret the obtained results;
- possess general scientific and special research methods
- economic processes in science;
- be able to think abstractly, apply analysis and synthesis to identify the key characteristics of financial systems, as well as the peculiarities of the behavior of their subjects;
- to reveal the skills of independent work, flexible thinking, openness to new knowledge;
- apply acquired theoretical knowledge to solve practical tasks and meaningfully interpret the obtained results;
- to understand the requirements for activity in the specialty, due to the need to ensure the sustainable development of Ukraine, its strengthening as a democratic, social, legal state.

Thematic plan

Topic No	Name of topics (lecture (LC), practical work (PW), individual work (IW))	Number of hours	
		daytime	extramural
1	LC "Concept of science and scientific activity"	1	1
	PW "Scientific and research activities of students"	1	1
	IW "Scientific Communication and Scientific School"	8	12

2	LC "History of Science and Scientific Studies.	1	1
	PW "Establishment of classification of sciences in Ukraine"	1	0
	IW "Classification of sciences in EU countries"	8	12
3	LC "Accounting as a Science"	2	0
	PW "Rules and postulates in accounting"	2	0
	IW "Accounting theories and world accounting schools"	8	12
4	LC "Scientific personnel: training and qualification"	2	1
	PW "Peculiarities of the training of scientific personnel in the field of accounting and taxation"	2	1
	IW "Training of scientific personnel in EU countries"	13	12
5	LC "Problem and topic of scientific research: order of selection and wording"	2	1
	PW "Scientific problem and justification of the research topic"	2	1
	IW "Algorithm for choosing the topic of scientific research"	8	12
6	LC "Search for information and selection of material"	2	1
	PW "Information support for scientific research"	2	0
	IW "Working with literature, collecting and processing material"	8	12
7	LC "Program and plan of scientific research"	2	0
	PW "Development of the program and plan of scientific research"	2	0
	IW "Plans of qualifying works in accounting and taxation"	13	12
8	LC "Formation of the results of scientific research"	2	0
	PW "Systematization of economic research results"	2	0
	IW "The text of a scientific paper: language and style"	9	12
9	LC "Scientist and scientific supervisor"	2	1
	PW "Academic integrity as an integral component ensuring the quality of education"	2	1
	IW "Moral and ethical relations of a scientist and scientific manager"	13	14
Together	LC	16	6
	PW	16	4
	IW	88	110

Individual educational and research task (if available): not provided.

Teaching methods:

- 1) verbal (lecture, explanation, story); 2) visual (illustration, demonstration);
- 3) practical (various types of exercises and tasks, performing calculations);
- 4) explanatory and illustrative (presentation of ready-made information by the teacher and its assimilation by students, presentation);
- 5) reproductive (performance of various tasks according to the sample);
- 6) active learning (business games, brainstorming, cases, educational discussion, performance of individual tasks).

Evaluation system and requirements:**Current performance**

1 The current success of applicants for the performance of educational types of work in training sessions and for the performance of independent work tasks is evaluated using a four-point rating scale with subsequent transfer to a 100-point scale. During the evaluation of the current academic performance, all types of work provided by the educational program are taken into account.

1.1 Lecture classes are evaluated by determining the quality of performance of specified tasks.

1.2 Practical classes are evaluated by the quality of performance of a control or individual task, performance and design of practical work.

1.3 Laboratory classes are evaluated by the quality of reports on the performance of laboratory work: not provided.

1.4 Seminar classes are evaluated by the quality of individual assignment/abstract.

2 The current performance of higher education applicants is assessed at each practical session (laboratory or seminar) on a four-point scale ("5", "4", "3", "2") and entered in the journal of academic performance.

– "excellent": the winner mastered the theoretical material flawlessly, demonstrates deep knowledge of the relevant topic or academic discipline, the main provisions;

- "good": the applicant has mastered the theoretical material well, has the main aspects from primary sources and recommended literature, presents it in a reasoned way; has practical skills, expresses his thoughts on certain problems, but certain inaccuracies and errors are assumed in the logic of the presentation of theoretical content or in the analysis of practical ones;

- "satisfactory": the applicant has basically mastered the theoretical knowledge of the educational topic or discipline, orients himself in primary sources and recommended literature, but answers unconvincingly, confuses concepts, answers additional questions uncertainly, does not have stable knowledge; when answering questions of a practical nature, reveals inaccuracy in knowledge, does not know how to evaluate facts and phenomena, connect them with the future profession;

- "unsatisfactory": the applicant has not mastered the educational material of the topic (discipline), does not know scientific facts, definitions, hardly orients himself in primary sources and recommended literature, lacks scientific thinking, practical skills are not formed.

3 The final score for the current activity is recognized as the arithmetic mean sum of points for each lesson, for individual work, current control works according to the formula:

$$K^{cur} = \frac{K1 + K2 + \dots + Kn}{n},$$

where $K^{current}$ - final assessment of success based on the results of current control;

$K1, K2, \dots, Kn$ - performance evaluation "n" measures of current control;

n - number of current control measures.

Final assessment

1 A student of higher education receives a credit in the last lesson in the discipline based on the results of the current assessment. The average score for the current activity is converted into points on a 100-point scale, according to the conversion table (table 1).

Applicants for higher education who have a current grade point average in the discipline lower than "3" (60 points) can increase their current grade by taking tests in the discipline in the last session.

Assessment of the knowledge of applicants through testing is carried out according to the following scale: - "Excellent": at least 90% of correct answers;

– "Very good": from 82% to 89% of correct answers; – "Good": from 74% to 81% of correct answers;

– "Satisfactory": from 67% to 73% of correct answers;

– "Satisfactory enough": from 60% to 66% of correct answers; – "Unsatisfactory": less than 60% of correct answers.

Table 1 – Recalculation of the average grade for the current activity into a multi-point scale

4-point scale	100-point scale	4-point scale	100-point scale	4-point scale	100-point scale	4-point scale	100-point scale
5	100	4,45	89	3,90	78	3,35	67
4,95	99	4,40	88	3,85	77	3,30	66
4,90	98	4,35	87	3,80	76	3,25	65
4,85	97	4,30	86	3,75	75	3,20	64
4,80	96	4,25	85	3,70	74	3,15	63
4,75	95	4,20	84	3,65	73	3,10	62
4,70	94	4,15	83	3,60	72	3,05	61
4,65	93	4,10	82	3,55	71	3,00	60
4,60	92	4,05	81	3,50	70	from 1,78 to 2,99	from 35 to 59
						reassembly	
4,55	91	4,00	80	3,45	69	from 0 to 1,77	from 0 to 34
4,50	90	3,95	79	3,40	68	repeated study	

2 The condition for obtaining credit is:

- making up for all missed classes;

– the average current grade in the discipline is not lower than "3" (60 points).

3 For performing individual independent work and participation in scientific events, additional points are awarded to the winners.

3.1 Additional points are added to the sum of points scored by the student of higher education for the current educational activity (for disciplines for which the final form of control is a credit), or to the final grade in the discipline for which the final form of control is an exam.

3.2 The number of additional points awarded for different types of individual tasks depends on their volume and importance:

- prizes in the discipline at the international / all-Ukrainian competition of scientific student works - 20 points;

- prize places in the discipline at the All-Ukrainian Olympiads - 20 points;

- participation in the international / all-Ukrainian competition of scientific student works - 15 points;

- participation in international / all-Ukrainian scientific conferences of students and young

scientists - 12 points;

- participation in all-Ukrainian Olympiads in the discipline - 10 points

- participation in Olympiads and scientific conferences of the Khnadu in the discipline - 5 points;

- performance of individual scientific and research (educational and research) tasks of increased complexity - 5 points.

3.3 The number of additional points cannot exceed 20 points. 4 The learning outcome is evaluated:

– on a 100-point scale (for differentiated assessment) according to table 2. The final grade together with additional points cannot exceed 100 points.

Table 2 – The scale for evaluating the knowledge of students based on the results of the final control of the academic discipline.

Score in points	Evaluation on a national scale		Evaluation according to the ECTS scale	
	exam	test	rating	criteria
90-100	perfectly	counted	A	The theoretical content of the course has been mastered in its entirety, without gaps, the necessary practical skills for working with the mastered material have been formed, all educational tasks provided for in the training program have been completed, the quality of their performance has been assessed with a number of points close to the maximum
80-90	good	counted	B	The theoretical content of the course has been mastered in its entirety, without gaps, the necessary practical skills for working with the mastered material have mainly been formed, all educational tasks provided for by the training program have been completed, the quality of most of them has been assessed with a number of points close to the maximum
75-79			C	The theoretical content of the course has been mastered in its entirety, without gaps, some practical skills of working with the mastered material have not been formed enough, all educational tasks provided for by the training program have been completed, the quality of none of them has

				been assessed with a minimum number of points, some types of tasks have been completed with errors
67-74	satisfactorily		D	The theoretical content of the course is partially mastered, but the gaps are not significant, the necessary practical skills for working with the mastered material are basically formed, most of the educational tasks provided by the training program have been completed, some of the completed tasks may contain errors
60-66			E	The theoretical content of the course has been partially mastered, some practical work skills have not been formed, many educational tasks provided by the training program have not been completed, or the quality of some of them has been evaluated with a number of points close to the minimum.
35-59	unsatisfactorily	not counted	FX	The theoretical content of the course has been partially mastered, the necessary practical work skills have not been formed, most of the prescribed training programs of educational tasks have not been completed, or the quality of their implementation has been assessed with a number of points close to the minimum; with additional independent work on the course material, it is possible to improve the quality of the performance of educational tasks (with the possibility of retaking)
0-34	unacceptable		F	The theoretical content of the course has not been mastered, the necessary practical work skills have not been formed, all completed educational tasks contain gross errors, additional independent work on the course material will not lead to any significant improvement in the quality of the performance of educational tasks (with a mandatory repeat course)

Course policy:

- the course involves working in a team, the environment in the classroom is friendly, creative, open to constructive criticism;
- mastering the discipline involves mandatory attendance of lectures and practical classes, as well as independent work;
- independent work involves the study of individual topics of the academic discipline, which are presented in accordance with the program for independent study, or were considered briefly;
- all tasks provided by the program must be completed within the set time;
- if the student of higher education is absent from classes for a good reason, he presents the completed tasks during independent preparation and consultation of the teacher;
- while studying the course, students of higher education must adhere to the rules of academic integrity set forth in the following documents: "Rules of academic integrity of participants in the educational process of the Khnadu" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_dobroch_1.pdf), "Academic Integrity. Checking the text of academic, scientific and qualification papers for plagiarism" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_85_1_01.pdf), "Moral and ethical code of participants in the educational process of the Khnadu" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_MEK_1.pdf).
- in case of detection of plagiarism, the applicant receives 0 points for the task and must repeat the tasks provided for in the syllabus;
- writing off during tests and exams is prohibited (including using mobile devices). Mobile devices are allowed to be used only during online testing.

Recommended Books:

1. Devon D. Brewer. Essentials of Scientific Research: A Practical Guide. Evidence Guides, 2020. 348 p.
2. Vinay Prasad. Methods for Scientific Research: A Guide for Engineers. De Gruyter, 2022. 310 p.
3. Pawan Kumar, Prasann Kumar. Scientific Research Methodology: Concepts and Quality. Discovery Publishing House Pvt Ltd, 2019. 204 p.
4. Catherine Dawson. Introduction to Research 5th Edition. Little, Brown Book Group, 2019. 160 p.
5. Marcy A. Kelly. The Fundamentals of Scientific Research: An Introductory Laboratory Manual. Wiley – Blackwell, 2016. 208 p.
6. Paul M. Kellstedt. The Fundamentals of Political Science Research 3rd Edition. Cambridge University Press, 2018. 344 p.

Developer(s)
the syllabus of the academic discipline

Volodymyr Malikov

Head of Department
accounting and taxation

Tatyana Kovaleva

