



## Syllabus Course Program



# Fundamentals of Academic Research

### Specialty

072 – Finance, banking, insurance and the stock market

### Educational program

Finance and Banking

### Level of education

Master's level

### Semester

1

### Institute

Institute of Education and Science in Economics, Management and International Business

### Department

Accounting and Finance(205)

### Course type

Mandatory

### Language of instruction

English

## Lecturers and course developers



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**Doctor of Economic Sciences, Professor, Professor of the Department of Accounting and Finance of NTU "KhPI"**

Author of more than 180 scientific and educational and methodological works. Leading lecturer in the disciplines: "Analysis of economic activity", "Economic analysis", "Fundamentals of scientific research", "Investment analysis"

More about the lecturer on the department's website

<http://web.kpi.kharkov.ua/eaiu/pro-kafedru/professors-ko-vikladats-kij-sklad/kolyesnichenko-anastasiya-sergiyivna/>

## General information

### Summary

The course "Fundamentals of scientific research" is aimed at developing knowledge and skills necessary for conducting scientific research. During the training, applicants will learn how to organize and conduct scientific research; master the skills of scientific communication using information technologies. Studying the course is based on an understanding of academic integrity and academic ethics. The course also helps applicants understand the procedure for preparing and defending a master's thesis.

### Course objectives and goals

Formation of theoretical knowledge regarding the methodology, methods and organization of scientific research and practical skills of scientific research. Mastering the skills of scientific communication using information technologies to solve the tasks.

### Format of classes

Lectures, practical classes, consultations. Essay (research work). Final control - credit.

### Competencies

1. Ability to abstract thinking, analysis and synthesis.
- GC3. Ability to conduct research at an appropriate level.
- GC4. Ability to identify, pose and solve problems.

GC5. Ability to make informed decisions.  
GC8. Ability to work in an international context.  
GC9. The ability to act on the basis of ethical considerations (motives).  
SC4. The ability to evaluate the effectiveness of scientific, analytical and methodical tools for justifying management decisions in the field of finance, banking and insurance.  
SC5. The ability to assess the limits of one's own professional competence and improve professional qualifications.  
SC6. Ability to apply interdisciplinary approaches to solving complex tasks and problems in the field of finance, banking and insurance.  
SC7. Ability to search, use and interpret information necessary for solving professional and scientific tasks in the field of finance, banking and insurance.  
SC8. Ability to apply innovative approaches in the field of finance, banking and insurance.  
SC9. Ability to develop technical tasks for the design of information systems in the field of finance, banking and insurance.

### **Learning outcomes**

PL01. To use the fundamental laws of the development of finance, banking and insurance in combination with research and management tools to carry out professional and scientific activities.  
PL 02. To know at the level of the latest achievements the main concepts and methodologies of scientific knowledge in the field of finance, banking and insurance.  
PL 03. Adapt and modify existing scientific approaches and methods to specific situations of professional activity.  
PL 04. Search, process, systematize and analyze information necessary for solving professional and scientific tasks in the field of finance, banking and insurance.  
PL 05. Communicate freely in a foreign language orally and in writing on professional and scientific issues, present and discuss research results.  
PL 06. It is accessible and reasoned to present the results of research orally and in writing, to participate in professional discussions.  
PL 07. To solve ethical dilemmas based on the norms of the law, ethical principles and universal human values  
PL 08. Be able to apply and manage innovative approaches in the field of finance, banking and insurance.  
PL 09. Apply management skills in finance, banking and insurance.  
PL 10. Carry out diagnostics and modeling of financial activities of economic entities.  
PL 11. Apply in-depth knowledge in the field of financial, banking and insurance management for decision-making.  
PL 12. To substantiate the choice of options for management decisions in the field of finance, banking and insurance and to evaluate their effectiveness taking into account the goals, existing restrictions, legislative and ethical aspects.  
PL 13. Assess the degree of complexity of tasks when planning activities and processing their results.

### **Student workload**

The total volume of the course is 150 hours (5ECTS credits): Lectures - 32 hours, workshops - 32 hours, self-study- 86 hours.

### **Course prerequisites**

The discipline follows the structural and logical scheme of the discipline presented initially, and is taught in the first course in the first semester".

### **Features of the course, teaching and learning methods, and technologies**

Interactive lectures with presentations, discussions, workshops, individual work, research work, work with literature and information sources, problem-based learning. Study materials are available to students through Timz

## Program of the course

### Topics of the lectures

- Topic 1. Science as a system of knowledge. Organization of research work in a higher educational institution
- Topic 2. Concept of scientific research and requirements for scientific research
- Topic 3. Methodology of scientific research
- Topic 4. Theoretical methods of scientific research
- Topic 5. Empirical methods of scientific research
- Topic 6. Economic and statistical methods in scientific research
- Topic 7. Information support of scientific work
- Topic 8. Computer technologies in scientific research
- Topic 9. Content and components of the research process
- Topic 10. Forms of displaying the results of scientific research
- Topic 11. Methodology of preparation and design of master's work
- Topic 12. Academic integrity as an important competence of higher education applicants

### Topics of the workshops

- Topic 1. Science as a system of knowledge. Organization of research work in a higher educational institution
- Topic 2. Concept of scientific research and requirements for scientific research
- Topic 3. Methodology of scientific research
- Topic 4. Theoretical methods of scientific research
- Topic 5. Empirical methods of scientific research
- Topic 6. Economic and statistical methods in scientific research
- Topic 7. Information support of scientific work
- Topic 8. Computer technologies in scientific research
- Topic 9. Content and components of the research process
- Topic 10. Forms of displaying the results of scientific research
- Topic 11. Methodology of preparation and design of master's work
- Topic 12. Academic integrity as an important competence of higher education applicants

### Topics of the laboratory classes

no laboratory classes.

### Self-study

The course involves the completion of an essay. Students are recommended additional materials (methodical instructions) for its implementation. In the part of independent work, it is recommended to familiarize yourself with the online course "Academic integrity: an online course for teachers" [https://prometheus.org.ua/course/course-v1:Prometheus+AI101+2021\\_T2](https://prometheus.org.ua/course/course-v1:Prometheus+AI101+2021_T2)

### Course materials and recommended reading

1. Younis, Ghadi. (2021). Scientific Research - basics. 10.13140/RG.2.2.17653.70881.
2. Robert V. Smith Principles of Scientific Research. [https://link.springer.com/chapter/10.1007/978-1-4899-7410-5\\_5](https://link.springer.com/chapter/10.1007/978-1-4899-7410-5_5)
3. Iershova N., Portna, O., Tretyak V., Moskalenko JI., Vasyliiev O. Crisis Management: Innovative Financial and Accounting Technologies. TEM Journal. 2021. 10(2).
4. Types of Scientific Research <https://innspub.net/types-of-scientific-research/>
5. Basics of Scientific Research. [https://tyonote.com/scientific\\_research/](https://tyonote.com/scientific_research/).
6. Akhmedov, Rafael & Tadzhiiev, Khanimkul. (2020). Basics of Scientific Research.
7. Methodological instructions for completing an individual task (abstract) from the discipline "Fundamentals of scientific research" [Electronic resource]: for students of all forms of special education. 072 "Accounting and taxation" / comp. N. Yu. Yershova; National technical Kharkiv Polytechnic University - Electronic text. Data - Kharkiv, 2024. 18 p.

8. Methodical instructions for practical classes from the course "Fundamentals of scientific research" [Electronic resource]: for students of special. 071 "Accounting and taxation" of all forms of education / comp. N. Yu. Yershova; National technical University "Kharkiv Polytechnic Institute". - Electron. text. data. - Kharkiv, 2024. 48 p.

9. Methodological guidelines for independent work in the discipline "Fundamentals of scientific research" for full-time and part-time students of specialty 072 - Finance, banking, insurance and the stock market / compiled by: N.Yu. Yershova - H.: NTU "KhPI", 2024. 23 p.

## Assessment and grading

### Criteria for assessment of student performance, and the final score structure

The final grade for the academic discipline is defined as the sum of grades/points for all successfully assessed learning outcomes during the semester: performance of 2 module works (20% each), performance of the essay - 20%; activity and effectiveness of the applicant's work during classroom classes (40%).

The assessment is written and includes: 2 theoretical questions and 1 practical task (40%).

### Grading scale

Total points	National	ECTS
90-100	Excellent	A
82-89	Good	B
75-81	Good	C
64-74	Satisfactory	D
60-63	Satisfactory	E
35-59	Unsatisfactory (requires additional learning)	FX
1-34	Unsatisfactory (requires repetition of the course)	F

## Norms of academic integrity and course policy

The student must adhere to the Code of Ethics of Academic Relations and Integrity of NTU "KhPI": to demonstrate discipline, good manners, kindness, honesty, and responsibility. Conflict situations should be openly discussed in academic groups with a lecturer, and if it is impossible to resolve the conflict, they should be brought to the attention of the Institute's management.

Regulatory and legal documents related to the implementation of the principles of academic integrity at NTU "KhPI" are available on the website: <http://blogs.kpi.kharkov.ua/v2/nv/akademichna-dobrochesnist/>

## Approval

Approved by

Date, signature

Head of the department  
Oleksandr MANOYLENKO

Date, signature

Guarantor of the educational program  
Tetiana NAZAROVA