## МІНІСТЕРСТВО ОСВІТИ І ПАУКИ УКРАЇНИ ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ ІМЕНІ СЕМЕНА КУЗНЕЦЯ

ТВЕРДЖЕНО

засіданні кафедри неджменту та бізнесу отокол №1 від 25.08.2023 р погоджено

Проректор 3 навчально-методичної роботи

Каріна НЕМАШКАЛО

ОСНОВИ НАУКОВО-АНАЛІТИЧНИХ ДОСЛІДЖЕНЬ

робоча програма навчальної дисципліни (РПНД)

Галузь знань

07 Управління та адміністрування

Спеціальність

073 Менеджмент

Підписано

Освітній рівень Освітня програма

перший (бакалаврський) Бізнес-адміністрування

Статус дисципліни

Мова викладання, навчання та оцінювання

обов'язкова

англійська

Розробники:

д.е.н., професор

д.е.н., професор

к.е.н., викладач

Завідувач кафедри

менеджменту та бізнесу

Гарант програми

Ганна ЧЕРНОІВАНОВА

Ірина ЧМУТОВА

Маргарита СОБАКАР

Тетяна ЛЕПЕЙКО

Ольга МИРОНОВА

Харків 2023

## MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE SIMON KUZNETS KHARKIV NATIONAL UNIVERSITY OF ECONOMICS

#### APPROVED

at the meeting of the department management and business Protocol № 1 of 25.08.2023

AGREED

Vice rector for educational and methodical

a NEMASHKALO

FUNDAMENTALS OF SCIENTIFIC ANALYTICAL RESEARCH

Program of the course

Field of knowledge

07 Management and administration

Specialty

073 Management

Study cycle

first (bachelor) **Business administration** 

Study programme

Course status

mandatory Language English

Developers:

Doctor in Economics

Professor

Doctor in Economics

Professor

PhD (Economics),

Lecturer

Hanna CHERNOIVANOVA

Iryna CHMUTOVA

Marharyta SOBAKAR

Head of Management and

**Business Department** 

Head of Study Programme

Tetyana LEPEYKO

Olga MYRONOVA

Kharkiy 2023

## INTRODUCTION

Current economic conditions increase the role of science in managerial decision-making. Consequently, future management professionals need to possess a significant level of theoretical knowledge and practical skills in conducting scientific research and their effective organization. Managers should be able to independently organize their scientific activities and know how to implement accumulated knowledge in practical activities. Additionally, contemporary managers require experience in the formation of the scientific potential of enterprises, which involves recruiting and training of highly skilled personnel. This activity also necessitates the application of a scientific approach.

In the process of learning, students acquire the necessary knowledge during lectures, perform tasks related to the practical application of the acquired knowledge. The study of theoretical provisions of the course "Fundamentals of Scientific and Analytical Research" requires their consolidation with the help of practical classes, and this constitutes a significant part of the discipline.

The purpose of the course is to acquire knowledge of theoretical and methodological principles, as well as practical skills in organizing scientific and analytical research and implementing them in the activities of enterprises.

The objectives of the course are:

ability to formulate the topic, problem, and objective of scientific research in their logical interconnection;

acquiring skills in structuring the subject area of the research;

ability to justify the relevance of the chosen topic and the significance of the anticipated scientific result;

gaining experience in constructing charts of individuals interested in using research results.

The subject of the course is a set of all of objects and phenomena that must be considered during scientific research for a correct understanding of the problem and the resolution of the set task.

The object of the course is the process of scientific research.

The learning outcomes and competencies formed by the course are defined in table 1.

Table 1

Learning outcomes and competencies formed by the course

Learning outcomes	Competencies
LO2	GC2
LO3	GC9
	GC10
LO6	SC10
	SC12
LO9	GC9

LO16	GC9
	GC11
LO17	GC9
LO21	GC5
	SC2

where GC2. Ability to preserve and enhance moral, cultural, scientific values and increase the achievements of society based on an understanding of the history and patterns of development of the subject area, its place in the general system of knowledge about nature and society and in the development of society, technology and technology, to use various types and forms of physical activity for active recreation and healthy lifestyle.

- GC5. Knowledge and understanding of the subject area and understanding of professional activities.
  - GC9. Ability to learn and master modern knowledge.
  - GC10. Ability to conduct research at the appropriate level.
  - GC11. Ability to adapt and act in a new situation.
- SC2. Ability to analyze the results of the organization's activities, to compare them with the factors of influence of the external and internal environment.
- SC10. Ability to evaluate the work performed, ensure its quality and motivate the organization's staff.
- SC12. Ability to analyze and structure organizational problems, to form reasonable decisions.
- LO2. Preserve moral, cultural, scientific values and multiply the achievements of society, use various types and forms of physical activity to lead a healthy lifestyle.
- LO3. Demonstrate knowledge of theories, methods and functions of management, modern concepts of leadership.
- LO6. Demonstrate skills in searching, collecting and analyzing information, calculating indicators to justify management decisions.
  - LO9. Demonstrate interaction, leadership, and teamwork skills.
- LO16. Demonstrate the skills of independent work, flexible thinking, openness to new knowledge, being critical and self-critical.
- LO17. Perform research individually and/or in a group under the guidance of a leader.
- LO21. Demonstrate communication, research, technological and cross-cultural skills necessary to analyze business situations, prepare, justify and present management decisions.

## COURSE CONTENT

# Content module 1: Theoretical fundamentals of science and scientific activity

# Topic 1: Science and scientific thinking. Research technology.

## 1.1. Characteristics of science and scientific activity.

Classification of sciences. The main functions of science. Main categories of science: theory, fact, hypothesis, concept. Evolution of science. Scientific thinking.

## 1.2. Features of scientific activity.

System elements of the topic of scientific research. Setting of topic, problems, purpose and objectives of scientific research. Relevance of the topic. Object and subject of scientific research. Structural model of the subject area. Types of research results. Reliability and validity of the scientific result. The concept of a new scientific result. Chart of the stakeholders.

## **Topic 2. Methods of working with concepts**

## 2.1. Principles of forming a definition.

Significant features of objects. The relationship of concepts and words. Content and scope of concepts. The relationship between concepts. Genus and species concepts. Generalization and limitation of concepts. Types of concepts. Definitions. Rules for the formation of definitions.

## 2.2. Classification of concepts.

Classification of concepts. Classification formation rules. Errors in classification.

# Content module 2. Technology of scientific and analytical research

# Topic 3. The technology of working with literature

# 3.1. Methods of studying and processing literary sources.

The necessity of the study of scientific literature. Typology of scientific and technical information, the main types of publications. Methods and techniques of information search. Compilation of bibliography. Methods of studying and processing of literary sources. Studying books and articles.

## 3.2. Work with scientific literature.

"Slow" and "quick" reading technologies. Principles of reading. Types of analysis and memorization of information. Abstract, extract, summary, scientific abstracting, scientific review. Stages of work with scientific literature. Citation. Searching for information on the Internet. Search engines.

# **Topic 4. Presentation of research results**

# 4.1. Rules for forming a research presentation.

Presentation of research results. Articles, conference papers, monograph. Scientific and technical report. Report of student's scientific research work.

# 4.2. Rules for forming a report.

System elements of the scientific discussion. Ways of argumentation in a scientific discussion. General ideas about public speaking. Oratory speech as a process. Improvisation.

## **Topic 5. Research methods and models.**

## **5.1.** Mathematical models.

Methods of economic life researching. The analysis and synthesis. Induction and deduction. Analogy. Idealization, abstraction, ranking. Methods of establishing causal relations.

## 5.2. Methods of empirical research

Methods of empirical research: observation, comparison, measurement, experiment.

#### 5.3. Methods of theoretical research

Methods of theoretical research: abstraction, idealization, formalization, generalization, thought experiment, axiomatic method, hypothetical method, modeling.

## 5.4. Models and modeling

Models and modeling – a tool of science. Stages of modeling. Types of models. Economic and mathematical modeling. Requirements for models.

The list of laboratory studies in the course is given in table 2.

# Table 2 The list of laboratory studies

Name of the topic	Content
Topic 1. Science and scientific thinking. Research technology	Performing tasks related to identifying the systemic elements of the research topic and structuring the subject area of the research. Formulating the topic of scientific and analytical research. Ensuring the reliability and justification of the scientific results.
Topic 2. Methods of working with concepts	Completing tasks related to awareness of the rules of definition formation. Searching, selecting, and reviewing literature sources on the given topic.
Topic 3. The technology of working with literature	Solving practical tasks related to learning the methodology of studying and processing of literary sources.
Topic 4. Presentation of research results	Compiling summaries, abstracts, and annotations of scientific works (articles, conference papers, monographs). Creating a bibliography of scientific publications on the research topic.
Topic 5. Research methods and models	Solving practical tasks related to learning the methods of research of economic phenomena and processes. Application of methods of empirical research of economic objects.  Constructing a model for scientific and analytical research. Studying the rules of conclusions formulating. Studying the rules for creating a presentation of research results

The list of self-studies in the course is given in table 3.

Table 3

## List of self-studies

Name of the topic	Content
Topic 1. Science and scientific thinking. Research technology	Study of lecture material, selection and review of literary sources on a given topic. Preparation for laboratory classes to ensure the reliability and validity of the scientific result. Completing tasks related to the selection and justification of the research topic.
Topic 2. Methods of working with concepts	Study of lecture material, selection and review of literary sources. Preparation for laboratory classes.  Distinguishing genus and species concepts.
Topic 3. The technology of working with literature	Study of lecture material, selection and review of literary sources. Performing laboratory tasks aimed at searching for information on the Internet using search engines. Preparation for a written test (topics 1-3).
Topic 4. Presentation of research results	Study of lecture material, selection and review of literary sources. Preparation for laboratory classes.  Studying the types of conclusions in scientific and analytical research. Preparation for a written test (topics 1-5).
Topic 5. Research methods and models	Study of lecture material, selection and review of literary sources. Preparation for laboratory classes. Preparation of a presentation on the chosen topic of scientific research. Preparation for a written test (topics 4-5).

The number of hours of laboratory studies and hours of self-study is given in the technological card of the course.

## TEACHING METHODS

In the process of teaching the course "Fundamentals of Scientific and Analytical Research", in order to acquire certain learning outcomes, to activate the educational process, it is envisaged to use during lecture/laboratory classes such teaching methods as: problematic lectures (Topic 1, 2, 4, 5), seminar-discussion (Topic 2, 4), individual research work (Topic 1, 2, 4, 5); presentation (Topic 2, 3, 4, 5).

#### FORMS AND METHODS OF ASSESSMENT

The University uses a 100-point cumulative system for assessing the learning outcomes of students.

The system for evaluating the acquired competences of students takes into account the types of classes that, according to the program of the course, include lectures, laboratory classes, as well as independent work.

Evaluation control measures include:

Current control is carried out during the semester at laboratory classes and is

evaluated by the amount of points scored (maximum amount is 100 points; minimum amount required is 60 points).

The current control includes the assessment of the students' knowledge during lectures and laboratory classes, the completion of competence-oriented tasks and their presentation, will allow to accumulate 100 points and includes:

completion of competence-oriented tasks on topics - 8 points (five competence-oriented tasks during the semester, total maximum number of points -40);

current control work 1 in the form of tests, includes topics 1–3. The maximum score is 12 points;

current control work 2, includes topics 4–5. The maximum score is 12 points; Self-studies will allow to accumulate by studying theoretical material:

writing essays by topic - 8 points (two essays during the semester, maximum - 16 points),

creative tasks - 10 points (two creative tasks during the semester, total maximum number of points -20).

Preparation for the test:

- 1) studying the theoretical material from the previous lecture before each subsequent lecture session. It is evaluated according to the following criteria: the ability to systematize knowledge on separate topics; the ability to draw reasonable conclusions; possession of a categorical apparatus;
- 2) collection, generalization, processing of information necessary for writing scientific research. It is evaluated according to the following criteria: skills and methods of performing practical tasks; the ability to find the necessary information; carry out its systematization and processing.

Semester control is conducted in the forms of differentiated assessment.

The final grade for the course is determined by summing up all the points obtained during the current control.

More detailed information on the assessment system is provided in technological card of the course.

## RECOMMENDED LITERATURE

#### Main

- 1. Данильян О. Г. Методологія наукових досліджень : підручник / О. Г. Данильян, О. П. Дзьобань. Харків : Право, 2019. 368 с.
- 2. Євтушенко М. Методологія та організація наукових досліджень / М. Євтушенко, М. Хижняк. Київ : Центр учбової літератури, 2019. 350 с.
- 3. Корягін М. В. Основи наукових досліджень : навчальний посібник. 2-ге вид. / М.В. Корягін, М. Ю. Чік. Київ : Алерта, 2019. 492 с.
- 4. Кузь О. М., Чешко В. Ф. Філософія науки. Х. : ХНЕУ ім. С. Кузнеця, 2017. 172 с. Режим доступу: <a href="http://www.repository.hneu.edu.ua/handle/123456789/17865">http://www.repository.hneu.edu.ua/handle/123456789/17865</a>.
- 5. Левітін Д. Структуроване мислення. Ясний розум в інформаційному хаосі. К.: Наш формат, 2020. 456 с.

- 6. Медвідь В. Ю. Методологія та організація наукових досліджень (у структурно-логічних схемах і таблицях): навч. посіб. / В. Ю. Медвідь, Ю. І. Данько, І. І. Коблянська. Суми: СНАУ, 2020. 220 с.
- 7. Пушкар О. І. Методологія та організація наукових досліджень [Електронний ресурс] : навч. посіб. / О. І. Пушкар. Харків : ХНЕУ ім. С. Кузнеця, 2020. 866 с. Режим доступу: http://www.repository.hneu.edu.ua/handle/123456789/23346.
- 8. Основи наукових досліджень [Електронний ресурс] : навчальний посібник / О. М. Сінчук, Т. М. Берідзе, М. Л. Барановська, О.В. Данілін, Д. О. Кальмус. Кременчук : ПП Щербатих О. В., 2022. 196 с.

#### Additional

- 9. Грузіна І. Розвиток наукових підходів до дослідження організації / І. Грузіна // Бізнес Інформ. 2022. № 2. С. 132-139. Режим доступу: http://www.repository.hneu.edu.ua/handle/123456789/27651
- 10. Jilcha Sileyew K. Research Design and Methodology. IntechOpen, 2020. URL: https://www.intechopen.com/books/cyberspace/ research-design- and-methodology
- 11. Lytvynenko A. O. Technologies developing critical thinking modern entrepreneur / A. O. Lytvynenko // Держава та регіони. / Серія: Економіка та підприємництво. 2020. № 5 (116). С. 60 65. URL: http://repository.hneu.edu.ua/handle/123456789/24302
- 12. Mitiagina T. The development of reflexivity and critical thinking as pillars for the emergence of creativity / T. Mitiagina, I. Bezugla / Економічний розвиток і спадщина Семена Кузнеця : матеріали міжнар. наук.-практ. конф., 30-31 травня 2019 р. : тези доповідей. Х.: ДІСА ПЛЮС, 2019. С. 368-369. URL: http://repository.hneu.edu.ua/handle/123456789/22069
- 13. Silvia P. J. How to write a lot: a practical guide to productive academic writing. Washington: American Psychological Association, 2018.
- 14. Tracy S. J. Qualitative Research Methods: collecting evidence, crafting analysis, communicating impact. Hoboken, NJ: John Wiley and Sons Ltd, 2020. 432 p.

## **Information resources**

- 15. Electronic catalog of Simon Kuznets Kharkiv National University of Economics (repository of S. Kuznets National University of Economics). Access mode: http://www.repository.hneu.edu.ua/ 16
- 16. Electronic catalog of the National Library of Ukraine named after V. I. Vernadskyi. Access mode: www.nbuv.gov.ua.
- 17. Electronic catalog of the Kharkiv State Scientific Library named after V. G. Korolenko. Access mode: http://korolenko.kharkov.com.
  - 18. Management website. Access mode: <a href="http://www.management.com.ua/">http://www.management.com.ua/</a>
  - 19. Legislation of Ukraine. Access mode: http://zakonrada.gov.ua

- 20. Official website of the State Statistics Service of Ukraine. Government portal. The only web portal of executive authorities: <a href="http://www.ukrstat.gov.ua">http://www.ukrstat.gov.ua</a>
- 21. Government portal. United web portal of executive authorities. Access mode : http://www.kmu.gov.ua/