

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ХАРКІВСЬКИЙ НАЦІОНАЛЬНИЙ ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ
ІМЕНІ СЕМЕНА КУЗНЕЦЯ

ЗАТВЕРДЖЕНО

на засіданні кафедри менеджменту та
бізнесу
Протокол № 1 від 25.08.2023 р.

ПОГОДЖЕНО

Проректор з навчально-методичної роботи



Каріна НЕМАШКАЛО

КРИТИЧНЕ МИСЛЕННЯ ТА ВИРІШЕННЯ ПРОБЛЕМ

робоча програма навчальної дисципліни (РПНД)

Галузь знань 07 «Управління та адміністрування»
Спеціальність 073 «Менеджмент»
Освітній рівень перший (бакалаврський)
Освітня програма Бізнес-адміністрування

Статус дисципліни вибіркова
Мова викладання, навчання та оцінювання англійська

Розробники:
д.е.н., професор

к.е.н., доцент

Завідувач кафедри
менеджменту та бізнесу

Гарант програми

Підписано КЕП

Ірина ЧМУТОВА

Олена ДРУГОВА

Тетяна ЛЕПЕЙКО

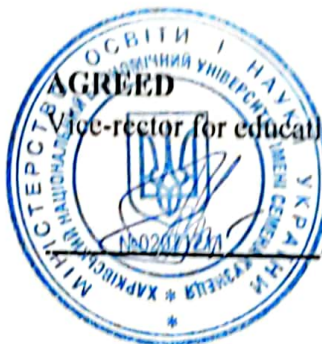
Ольга МИРОНОВА

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



Vice-rector for educational and methodical work

Karina NEMASHKALO

CRITICAL THINKING AND PROBLEM SOLVING

Program of the course

Field of knowledge **07 "Management and administration"**
Specialty **073 "Management"**
Study cycle **first (bachelor)**
Study programme **Business administration**

Course status **elective**
Language **English**

Developers:

Doctor in Economics
Professor

Digitally signed

Iryna CHMUTOVA

PhD (Economics),
Associate Professor

Olena DRUHOVA

Head of Management and
Business Department

Tetyana LEPEYKO

Head of Study
Programme

Olga MYRONOVA

INTRODUCTION

According to the study "The Future Skills - Employment in 2030", the key skills of the future will be idea generation, decision making, originality, active learning, complex problem solving, critical thinking, system analysis, deductive thinking. Critical thinking provides an opportunity to adequately assess new conditions and form effective management influences, to adapt to weakly predictable socio-economic, political, technological and other changes. Critical thinking is formed on the basis of the development of independent conscious thinking, the ability to logically and clearly formulate one's thoughts, to quickly make decisions based on information analysis.

Studying the course "Critical thinking and problem solving" provides an opportunity to acquire the skills of logical and critical thinking, decision-making techniques, argumentation. It provides the ability to critically analyze and evaluate existing ideas and synthesize new ones, to apply critical thinking techniques when solving management problems.

The purpose of the course "Critical Thinking and Problem Solving" is the formation in students of a system of skills of observation, objective evaluation and interpretation of information, argumentation, formulation of reasonable conclusions, the ability to apply the obtained results to solve problems in the field of management and generate new ideas.

The tasks of the course are:

- provision of basic knowledge on the formation of logical thinking in students;
- acquainting applicants with the basics of the theory of argumentation;
- formation of students' ability to solve logical problems, which are basic for solving various problems in the field of management;
- development of abilities and skills of independent critical thinking in practical situations;
- development and improvement of communicative competences.

The object of the course is the external and internal environment of business entities, the parameters of their activity, which can potentially cause and generate problems to be solved in the management system.

The subject of the course is a set of principles, tools and techniques of critical thinking.

The learning outcomes and competences formed by the course are given in table 1.

Table 1

Learning outcomes and competencies formed by the course

Learning outcomes	Competencies
LO 3.	GC 10.
LO 4	GC 3.
	GC 10.
	GC 12.
LO 6.	GC 4.
	SC 18.
LO 9.	GC 9.
LO 11.	GC 3.
LO 16.	GC 5.
	GC 9.
	GC 11.
LO 17.	GC 3.
	GC 5.
	GC 9.
	GC 10.
	SC 2.
LO 19.	GC 5.
	SC 2.
	SC 12.
LO 21.	GC 5.

where LO 3. Demonstrate knowledge of theories, methods and functions of management, modern concepts of leadership.

LO 4. Demonstrate skills in identifying problems and justifying management decisions.

LO 6. Demonstrate skills in searching, collecting and analyzing information, calculating indicators to justify management decisions.

LO 9. Demonstrate interaction, leadership, and teamwork skills.

LO 11. Demonstrate skills in situation analysis and communication in various areas of the organization's activities.

LO 16. Demonstrate the skills of independent work, flexible thinking, openness to new knowledge, being critical and self-critical.

LO 17. Perform research individually and/or in a group under the guidance of a leader.

LO 19. Demonstrate skills in analyzing and synthesizing information, applying them to analyze and solve problems in various areas of business and management.

LO 21. Demonstrate communication, research, technological and cross-cultural skills necessary to analyze business situations, prepare, justify and present management decisions.

GC 3. Ability to think abstractly, analyze, and synthesize.

GC 4. Ability to apply knowledge in practical situations.

GC 5. Knowledge and understanding of the subject area and understanding of professional activities.

GC 9. Ability to learn and master modern knowledge.

GC 10. Ability to conduct research at the appropriate level.

GC 11. Ability to adapt and act in a new situation.

GC 12. Ability to generate new ideas (creativity).

SC 2. Ability to analyze the results of the organization's activities, to compare them with the factors of influence of the external and internal environment.

SC 12. Ability to analyze and structure organizational problems, to form reasonable decisions.
SC 18. Ability to use methods of processing primary information on the economic foundations of the organization's functioning to form a system of the most urgent tasks.

COURSE CONTENT

Content module 1: Theoretical foundations of critical thinking

Topic 1. Fundamentals of critical thinking

1.1. Concepts and features of critical thinking

The need to develop critical thinking. Characteristics of critical thinking and its components: theory, practice, attitudes. Connection of critical thinking with logic, theory of argumentation, theory of decision-making.

1.2. Methods of critical thinking.

The main features of critical thinking: independence, problem setting, decision-making, clear argumentation. Components, main features, principles: skepticism and objectivity. Algorithm of critical thinking, main phases: analysis, understanding, evaluation, criticism. The essence of the main methods of critical thinking. Techniques of critical thinking.

Topic 2. Basic formal-logical laws and method of formalization

2.1. The concept of the law of thinking. Logical correctness of reasoning

Right thinking. Certainty, consistency, uncontroversiality and reasonableness of opinions. Logical error.

2.2. Basic formal and logical laws.

The main formal and logical laws are: the law of identity; law of non-contradiction; the law of the excluded third; the law of sufficient reason. Logical rules.

2.3. Method of formalization.

Definition of formalization. Symbol language. Practical application of logical laws.

Topic 3. Conceptual apparatus of reasoning

3.1. Concept as a form of reasoning. The main methods of formation of concepts

Linguistic forms of expression of concepts. Concept and name. The meaning and significance of the name. Principles of naming theory. The main methods of formation of concepts. Comparison, analysis, synthesis, abstraction, generalization.

3.2. Logical operations with the definition of a concept.

Logical characteristics of the concept. Concept structure. The content of the concept. Signs, types of signs. Significant and non-essential signs. Scope of the concept. Class (plural) and subclass (subset). A class element. The element's belonging to a class and the inclusion of a class in a class. Operations with classes: intersection, union, addition, subtraction.

Topic 4. Theory of inferences

4.1. Condition as a form of thinking

Linguistic forms of expression of inference. Logical characteristic of inference. The structure of the inference: premises, conclusion. Semantic level of inference analysis. Concept of relation of logical sequence and its connection with logical laws. Syntactic level of inference analysis. Concept of inference and rules of inference.

4.2. Types of inferences

Direct and indirect inferences. Deductive, inductive and inferences by analogy. Demonstrative and plausible (probable) inferences.

Content module 2. Application of critical thinking technology to solve management problems

Topic 5. Critical thinking and the decision-making process

5.1. Information and its role in the decision-making process

Concepts and types of information. Sources. Evaluation of information, standards and evaluation criteria. Selection of information. The role of understanding in information processing. Technological features and principles of working with information sources. Making smart decisions. Structure of decision-making. Descriptive and prescriptive processes. Clarity heuristics. Heuristics of representativeness.

5.2. Argumentation process

The essence of the argumentation process, the structure of argumentation, empirical and theoretical argumentation. Types of arguments. The essence of deductive reasoning, the universality and conditions of application of deductive reasoning, the essence of non-deductive reasoning: inductive reasoning and reasoning by analogy, their specifics and main types.

Topic 6. Basic methods of generating ideas

6.1. The essence of the scientific method and its role in generating ideas

Definition of the scientific method. Stages of the scientific method: problem statement, observation, hypothesis formulation, experiment, analysis of results, conclusions, publication of results.

6.2. Forms of knowledge development

Concepts and types of hypotheses. Theories and their types. Functions of theories. Strategies for testing theories and hypotheses. The role of hypotheses and theories in argumentation.

Topic 7. Solving problems based on critical thinking

7.1. Key concepts of problem-oriented management

A problematic situation. Approaches to the formalization and structuring of problems: checklist, research, perception.

7.2. Problem-oriented management methods.

Categories of the management process in the context of a problem-oriented approach. Stages of problem solving. Problem solving methods: TOTE process, SPALTEN method, "8D" method.

The list of practical (seminar) studies in the course is given in table 2.

Table 2

The list of practical studies

Name of the topic and/or task	Content
Topic 1 Task 1	Development of a critical thinking algorithm
Topic 2 Task 2	Practical application of the laws of logic
Topic 3 Task 3	Derivation of the economic concept
Topic 4 Task 4	Formulation of deductive and inductive assumptions
Topic 5 Task 5	Information evaluation technology, theoretical and empirical argumentation
Topic 6 Task 6	Formulation of hypotheses
Topic 7 Task 7	Development of skills for solving practical management problems

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

Table 3

List of self-studies

Name of the topic and/or task	Content
Topic 1 – 7	Studying lecture material
Topic 1 – 7	Preparation for practical classes
Topic 1, 3, 5	Performing an individual task (presentation)
Topic 4, 7	Preparing for the final test

The number of hours of lectures, practical (seminar) studies and hours of self-study is given in the technological card of the course.

TEACHING METHODS

In the process of teaching the course, in order to acquire certain learning outcomes, to activate the educational process, it is envisaged to use such teaching methods as: discussion (topic 1-7), presentations (topic 1, 3, 5), group work (topic 1-7), simulation of professional situations (topic 5), cases (topic 7).

FORMS AND METHODS OF ASSESSMENT

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

Current control is carried out during lectures, practical, laboratory and seminar classes and is aimed at checking the level of readiness of the student to perform a specific job and is evaluated by the amount of points scored:

– for courses with a form of semester control as an exam: maximum amount is 60 points; minimum amount required is 35 points.

The final control includes current control and an exam.

Semester control is carried out in the form of a semester exam.

The maximum amount for an exam is 40 points. The minimum amount required for passing an exam is 25 points.

The final grade in the course is determined:

– for disciplines with a form of exam, the final grade is the amount of all points received during the current control and the exam grade.

During the teaching of the course, the following control measures are used:

Presentation. 3 presentations are prepared during the semester. The maximum score is 12 points, if the topic of the report is fully disclosed, the minimum is 7 points, if the report is logically structured and discloses the topic, but does not contain its own reasoning about the problem. The total number of points is 36 points.

Written tests. During the semester, 2 written tests are performed. The first covers topics 1-4; the second - topics 5-7. The maximum score for each test is 12 points for a fully completed task, the minimum score is 7 points for completing 50% of the tasks without providing explanations and conclusions. The total number of points is 24 points.

Semester control: Grading including Exam (40 points).

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

An example of an exam card and assessment criteria are given below.

Example of an exam card

Simon Kuznets Kharkiv National University of Economics

First (bachelor's) level of higher education

Specialty "Management"

Study programme "Business Administration".

Course "Critical thinking and problem solving"

EXAM CARD № 1

Task 1 (stereotype) – 8 points.

Answer the questions posed in the task:

Below is the definition of management from the famous American theorist of organizational problems, Peter Drucker:

"Management is a special type of activity that transforms an unorganized crowd into an effective purposeful and productive group. Management is essentially a stimulating element of social change and a locomotive of significant social change. It is management that, more than anything else, has given impetus to the most significant social phenomenon: explosion of education".

Task:

What statement conveys the main idea of the author?

What conclusion does the author make in this definition?

What is the author's attitude towards management?

Task 2 (diagnostic) – 12 points.

Solve the problem and draw conclusions

The components of the external environment include the following aspects: competitors, economic condition, technical progress, consumers, intermediaries, socio-cultural factors, the system of economic relations in the country, political conditions, suppliers, political and public organizations, the international environment, legislation, scientific and technical development, international events, peculiarities of economic relations, shareholders, etc. Group these aspects into two categories. To the first, attribute the factors of direct action of the external environment, to the second - factors of indirect action. Justify your choice.

Task 3 (heuristic) – 20 points.

Solve the problem and draw conclusions

Imagine yourself in the role of the manager of the "Best choice" supermarket chain. Your stores demonstrate high performance by meeting sales targets, maintaining a stable workforce and receiving positive feedback from suppliers and customers. However, one of the supermarkets is constantly experiencing difficulties in achieving its goals: there is a high turnover of personnel, the volume of sales is decreasing, and the number of service complaints is also increasing.

It is necessary to determine the main aspects of the problems in the functioning of this supermarket and to develop specific measures to solve them. In addition, it is important to analyze and evaluate the possible consequences of the proposed solutions.

Propose five options for solutions and set their priorities, justifying your choice.

Table 1

Alternative options for solving problems in supermarket operations

Activities	Assessment of activities
1. Close the supermarket and rent out the premises	
2. Fire the chief manager and hire a young specialist	
3. Transfer a more experienced manager from another supermarket that you own	
4. Identify employees who initiate any dubious activities in the supermarket and fire them	
5. Ask questions about the state of discipline and attitude to work in the supermarket at the general meeting	
6. To improve the system of material and moral encouragement, to allocate an additional premium fund	
7. Carry out measures aimed at reorganization of the internal environment	
8. Conduct a seminar on labor organization and personnel management for the supermarket staff	
9. Send the manager of the supermarket to training courses for management personnel	
10. Increase advertising costs for this particular supermarket	
11. Introduce accumulative discount cards for regular customers	
12. To carry out a series of promotions for goods that can be purchased in this supermarket	
13. Equip a place for parking customers' cars near the supermarket	

Approved at the meeting of Management and Business Department,
Protocol № ___ of « ___ » _____ 20 ___ year.

Examiner
Head of Department

Doctor of Economics, Professor Iryna CHMUTOVA
Doctor of Economics, Professor Tatyana LEPEYKO

Assessment criteria

Final points for the exam consist of the sum of points for the completion of all tasks.

The algorithm for solving each task includes separate stages that differ in complexity, time-consumingness, and importance for solving the task. Therefore, individual tasks and stages of their solution are evaluated separately from each other as follows:

Task 1 (stereotype) – 8 points.

The maximum total number of points for the **completed stereotypical** task is **8 points**, namely for:

the correct application of logic techniques - 5 points;

the correct application of argumentation techniques and the presence of well-founded conclusions - 3 points.

Task 2 (diagnostic) – 12 points.

The maximum total number of points for the completed **diagnostic** task is **12 points**, namely for:

correct classification – 7 points;

substantiation of group composition - 5 points.

Task 3 (heuristic) – 20 points.

The maximum total number of points for the completed **heuristic** task is **20 points**, namely for:

the correctness of the assessment of indicators in accordance with the conditions of the task - 7 points;

correctness of guesses - 5 points;

availability of substantiated conclusions - 8 points.

RECOMMENDED LITERATURE

Main

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Additional

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Information resources

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