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“IHOR SIKORSKY KYIV POLYTECHNIC INSTITUTE”

MANAGERIAL DECISION MAKING

EDUCATIONAL AND METHODOLOGICAL COMPLEX OF THE DISCIPLINE

*Recommended by the Methodical Council of Igor Sikorskyi KPI
as a study guide for master's degree holders,
specialty "Management and Business Administration"*

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MANAGERIAL DECISION MAKING

Educational and methodological complex of the discipline

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In the educational and methodological complex of the discipline "Management Decision Making" for students of the specialty "Management and Business Administration", an educational and thematic plan of the discipline, methodological tips for studying lecture materials, practical classes, independent work of students, methodological recommendations for performing calculation work are presented. Test tasks for testing students' knowledge and criteria for current and final control are provided.

The educational complex will be useful for students of economic specialties who want to master the discipline "Making managerial decisions".

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INTRODUCTION

According to the educational program for training masters of the specialty "Management and business administration" at the National Technical University of Ukraine "Igor Sikorskyi Kyiv Polytechnic Institute" the discipline "Managerial decision-making", which belongs to the list of mandatory components of EP.

The modern stage of management development determines the need to train management decision-making specialists who would be oriented in modern approaches and methods of decision evaluation, its selection, justification and implementation and possess the techniques of effective individual and group decision-making to increase the efficiency of enterprise management.

This makes it relevant to study the discipline "Managerial decision-making", that has both theoretical and practical focus. The discipline reveals the specifics of making and implementing managerial decisions in conditions of uncertainty and risk, aimed at achieving the organization's goals and reducing the likelihood of an adverse outcome. The logic of the course structure involves the consistent study of theoretical and methodological principles, mastering the methods and tools for justifying and evaluating management decisions, as well as determining the applied aspects of organizing their implementation in enterprises.

The purpose of the discipline is to master the knowledge, skills and practical skills necessary for making managerial decisions at various levels of management in the organization, as well as the development of the ability and willingness to use them adequately and effectively to achieve the goals of the organization. After learning the discipline, students will develop the following competences and program learning outcomes.

General competences:

GC 7 – Ability to abstract thinking, analysis and synthesis.

Professional competences:

PC 9 Ability to analyze and structure the problems of the organization, make effective management decisions and ensure their implementation

PC 10 Ability to manage the organization and its development

PC 11 The ability to manage industrial enterprises of various forms of ownership and spheres of activity, divisions, teams, projects, using the system of modern methods of management and administration, technologies, integrated management approaches

PC 13 The ability to find and evaluate the opportunities for the development of industrial enterprises, to justify the mechanisms of transformation of management systems based on integration management solutions

PC 14 Ability to develop, economically substantiate and implement management solutions in practice taking into account digital business strategies in order to effectively use resources, increase profitability and ensure the development of the enterprise

Program learning outcomes:

PLO 1 Critically consider, select and use the necessary scientific, methodical and analytical tools for management in unpredictable conditions

PLO 2 Identify problems in the organization and justify the methods of solving them

PLO 5 Plan strategic and tactical activities of the organization

PLO 6 Have the skills to make, justify and ensure the implementation of management decisions in unpredictable conditions, taking into account the requirements of current legislation, ethical considerations and social responsibility

PLO 15 To substantiate management decisions for the rational organization of the management and administration system, effective financial and investment support for activity of industrial enterprises

The topics of the discipline program are logically interconnected and consistently consider the issue of management decision-making, which is necessary for a master's degree. The issues covered by the program are related to the general provisions of the organization of scientific work in higher educational institutions; educational and professional program of training specialists.

The study guide is aimed at helping students majoring in "Management Decision Making" in learning the necessary theoretical knowledge of the discipline, acquiring decision-making skills within the framework of performing the manager's functional duties.

I. EDUCATIONAL AND THEMATIC PLAN OF THE DISCIPLINE

The educational thematic plan of the discipline includes the following topics:

Names of sections and topics	Number of hours				
	total	including			
		Lectures	Practical	Laboratory	ISW
Topic 1. Basics of managerial decision-making	7	2	1	-	4
Topic 2. Approaches to managerial decision-making	7	2	1	-	4
Topic 3. Cognitive and psychological features of decision-making	8	2	1	-	5
Topic 4. Managerial decision-making models	8	2	1	-	5
Topic 5. Features and styles of individual decision-making	8	2	2	-	4
Topic 6. Peculiarities of making and phenomena of group decisions	8	2	2	-	4
Topic 7. Methods of management decisions grounding	8	2	2	-	4
Topic 8. Methods of management decisions evaluation	8	2	2	-	4
Topic 9. Implementation of management decisions	8	2	2	-	4
MCT (Module Control Test)	4	-	2	-	2
Calculation work	10	-	-	-	10
Preparation for the test (Test)	6	-	2	-	4
Total	90	18	18	-	54

II. THEMATIC PROGRAM OF THE DISCIPLINE

The study of the academic discipline includes the following topics.

Topic 1. Basics of managerial decision-making.

The essence of management decisions. The final goal of the management decision. Goals and consequences of management decision. Decision-making theories: normative theory, descriptive theory. Types of problem situations. Classification of problems. Classification features of management decisions. Classification of management decisions. Structured, semi-structured and unstructured solutions. Newell-Simon hypothesis. Classification of Henry Mintzberg. Classification of decisions by management functions. Strategic, operational and tactical decisions. Individual, collegial and collective decisions. Directive, advisory and indicative decisions. Intuitive, rational and analogous decisions. Logical, analytical, impulsive and inert decisions. Classification of decisions by breadth of coverage and level of acceptance. Classification of decisions by duration of action, degree of complexity and level of centralization. Other signs of classification of management decisions. Conditions for making managerial decisions. Conditions of certainty and uncertainty in decision-making. Risk conditions in decision-making. The rule of avoiding uncertainty. Conditions of certainty in decision-making. Types of uncertainty. The main causes of uncertainty. Conditions of ambiguity in decision-making. Characteristics of the decision-making process. Factors affecting the process of management decision-making. 7 steps of an effective decision-making process. Requirements for management decisions. Implementation of the decision.

Topic 2. Approaches to managerial decision-making

A rational approach. Algorithm of a rational approach to decision-making. Choice under uncertainty. "Expected value". Disadvantages of a rational approach. Paradoxes of the rational approach: analysis paralysis, rational ignorance. Complexity of decision-making in rational organizations. A rational approach is limited. Conditions of bounded rationality. Prerequisites of a limited rational approach. Factors limiting rationality. Disadvantages of a limited rational approach. Optimization of a boundedly rational approach. Intuitive approach. Forms of intuitive decision-making.

Topic 3. Cognitive and psychological features of decision-making

Cognitive foundations of bounded rationality. Characteristics of human cognitive systems. Algorithmic and reflexive thinking. Heuristics and cognitive distortions in decision-making. Theory of prospects. Principles of decision-making according to D. Kahneman and A. Tversky. Heuristics: heuristics of availability, heuristics of representativeness, heuristics of affect. Cognitive distortions in decision-making according to Richard Thaler. Nudging theory.

Topic 4. Managerial decision-making models

Classical (normative) model. Its basic concepts. Assumptions of the classical model. Methods of the classical model. Administrative (descriptive) model. Basic concepts of this model. Assumptions of the administrative model. Political model (Carnegie model). Basic concepts of the political model. Scheme of decision-making in the political model. Comparative characteristics of classical, administrative and political models. Incremental models. Phases of the incremental process. Logical incrementalism, its key elements. Stages of logical incrementalism. The incremental process model. Peculiarities of decision-making in organizations. Recommendations for the organization of the incremental process. Mixed scanning model. Its phases. The model of "garbage can" (or "organized anarchy"). Its characteristics. Types of limitations inherent in managers when making decisions. Basic concepts of the "garbage can" model. Phases of the decision-making process. Conflict model (Croisier model).

Topic 5. Features and styles of individual decision-making

The essence of individual decision. Types of individual administrative decisions: participatory and authoritarian decisions. Factors affecting individual decisions. The most common heuristics that influence individual decisions are: availability heuristic, representativeness heuristic, heuristic of attachment and agreement. Peculiarities of making individual decisions. Advantages and disadvantages of individual solutions. Individual decision-making styles: impulsive, risky, balanced, cautious and inert styles. Decision-making styles according to Rensis Likert: exploitative-authoritarian, sympathetic-authoritarian, consultative-democratic, participatory. Continuum of seven styles according to R. Tennenbaum and U. Schmidt. Decision-making styles according to Alan Rowe: directive, analytical, conceptual, behavioral. Decision-making styles

according to K. Brass, M. Driver, R. Larson and H. Uria. Decision-making and management styles according to Yitzhak Azides. The model of involvement of subordinates in decision-making by V. Vroom, F. Yetton and A. Yago. Decision-making styles in the model of Vroom, Yetton and Iago. Cynefin model Framework .

Topic 6. Peculiarities of making and phenomena of group decisions

The concept of group decision. Their advantages and disadvantages. Peculiarities of group decision-making. Principles of group decision-making. Styles of group decision-making. Dictator mode. Ritual mode. Consensus, voting and compromise. Voting criteria. Phenomena of group decision-making. The phenomenon of groupthink, its symptoms. The phenomenon of group normalization. Recommendations for preventing the phenomenon of groupthink. The phenomenon of group polarization. The phenomenon of social facilitation. The phenomenon of social laziness. The phenomenon of inadequate evaluation of one's own participation. The phenomenon of social dominance. The phenomenon of idiosyncratic credit. The phenomenon of conformity. The phenomenon of inadequacy of judgment to belief. Paradoxes of group thinking. The Paradox of the Concourse. Kenneth Arrow's paradox (theorem). Abilene's paradox.

Topic 7. Methods of management decisions grounding

Methods of problem diagnosis: method of absolute, relative and average values, comparison method, grouping method, index method, elimination method, break-even analysis. Heuristic methods of generating ideas, evaluating and choosing a solution: the interview method, the questionnaire method, the method of waiting for inspiration, the Matchet method, the method of eliminating hopeless situations. Group heuristic methods of generating ideas, evaluating and choosing solutions: direct "brainstorming" method, inverted "brainstorming" method, discussion method, analog method, synectics method; key questions method, free association method, Delphi method, Pattern method. Methods of expert evaluation and decision selection: method of selective evaluations, method of absolute evaluations, method of ranking, method of relative evaluations, method of pairwise comparisons (full pairwise comparisons and partial pairwise comparisons),

methods of collective expert evaluation, method of expert commissions, evaluation of consistency of expert judgments (coefficient correlations, rank correlation coefficient, Spearman correlation coefficient, concordance coefficient and Pearson's test). Logical and formalized methods of justifying decisions: decision tree, sensitivity analysis, Monte Carlo method. Game-theoretic methods of justifying decisions: scenario method, game theory methods, Monte Carlo method. Multi-criteria methods of substantiating decisions: direct method, compensation method, method of inequality thresholds, axiomatic methods.

Topic 8. Methods of management decisions evaluation

Evaluation of management decisions. Relationship between the quality and effectiveness of management decisions. Types of assessments of management decisions. Aspects of the effectiveness of management decisions. Component evaluations of managerial decisions. Quality criteria of management decision. Factors affecting the effectiveness of a management decision. Qualitative and quantitative performance indicators. Types of effectiveness of management decisions. Organizational effectiveness of management decisions. Economic, social, technological, environmental and legal effectiveness of management decisions. Errors in making managerial decisions. Concept of wrong management decisions. Managers' mistakes in decision-making: subjective and objective. Types of wrong decisions. Effect of decision fatigue. Overcoming the effect of decision fatigue.

Topic 9. Implementation of management decisions

The process of implementing management decisions. The concept of implementation of management decisions. Stages of implementation of management decisions: development of a decision implementation plan, decision implementation management, decision implementation control, decision implementation evaluation. Distribution of responsibility for management decisions. Types of responsibility. Control over the implementation of management decisions, its types. The process of monitoring the implementation of management decisions. Control difficulties.

III. METHODOLOGICAL ADVICE FOR STUDYING TOPICS OF THE DISCIPLINE

Topic 1. Basics of managerial decision-making

Content

1. The essence and signs of management decisions.
2. Classification of management decisions.
3. Conditions for making managerial decisions.
4. Characteristics of the decision-making process.

Methodical tips to study the topic:

When studying this topic, students should learn the essence and signs of management decisions . Students should be aware of the difference between normative and descriptive theories of decision-making. Students need to understand the difference between different types of management decisions. It is also appropriate to consider the Newell-Simon Hypothesis. It is necessary to form an idea about the conditions for making managerial decisions. It is necessary to study and understand the conditions of certainty and uncertainty when making decisions, the conditions of risk. When studying this topic, it is imperative to consider the decision-making process. There are 7 steps to an effective decision-making process to follow.

Control questions:

1. Reveal the essence and characteristics of management decisions .
2. Classify management decisions according to various characteristics.
3. Reveal the essence of normative and descriptive theories of decision-making.
4. Specify types of problem situations.
5. Reveal the essence of the Newell-Simon hypothesis
6. Describe the conditions for making managerial decisions.
7. Determine the peculiarities of decision-making in conditions of certainty and uncertainty.
8. What factors influence the process of management decision-making?

9. Describe 7 steps of an effective decision-making process.

Basic literature: 1,2,5.

Additional literature: 3,4,6,7,9,10.

Topic 2. Approaches to management decision-making

Content

1. The rational approach.
2. The limited rational approach.
3. Intuitive approach.

Methodical tips to study the topic

When studying this topic, students need to consider the algorithm of a rational approach to decision-making. First of all, it is necessary to find out the essence of the concept "Expected value". It is necessary to consider the shortcomings of the rational approach. It is appropriate to consider the paradoxes of the rational approach: paralysis of analysis, rational ignorance. It is important to consider the peculiarities of decision-making in rational organizations. An important component of studying the topic is the awareness of the essence of the limited rational approach. Special attention should be paid to the conditions of bounded rationality. Students should be aware of the limiting factors of rationality. They should familiarize yourself with the intuitive approach to decision-making.

Control questions:

1. Reveal the essence of a rational approach
2. What is "expected value"?
3. Reveal Disadvantages of a rational approach
4. What is the essence of a boundedly rational approach to decision-making?
5. Reveal the essence of the paradoxes of the rational approach: analysis paralysis, rational ignorance.
6. What is an intuitive approach to decision making?
7. What forms of intuitive decision-making do you know?

Basic literature: 1,2,5.

Additional literature: 3,4,6,7,9,10.

Topic 3. Cognitive and psychological features of decision-making

Content

1. Cognitive basis of bounded rationality.
2. Heuristics and cognitive distortions in decision-making.

Methodical tips to study the topic

When studying this topic, it is necessary to find out the essence of human cognitive systems and the peculiarities of algorithmic and reflexive thinking. Heuristics and cognitive distortions in decision-making should be investigated. Special attention should be paid to the theory of prospects. It is appropriate to consider the principles of decision-making according to D. Kahneman and A. Tversky. Students should be able to distinguish between accessibility, representativeness and affect heuristics. The study of cognitive distortions in decision-making according to Richard Thaler is mandatory. It is necessary to study the basics of nudging theory.

Control questions:

1. Reveal the essence of the concept of "cognitive human system".
2. What is the essence of heuristics and cognitive distortions in decision-making?
3. Reveal the postulates of prospect theory.
4. What is the difference between algorithmic and reflexive thinking?
5. Reveal the principles of decision-making according to D. Kahneman and A. Tversky
6. What types of heuristics do you know?
7. Reveal the essence of cognitive distortions in decision-making according to Richard Thaler.
8. What is the nudging theory?

Basic literature: 2,3,4.

Additional literature: 2,4,5,6,8,9,10.

Topic 4. Management decision-making models

Content

1. Classical (normative) model.
2. Administrative (descriptive) model.
3. Political model (Carnegie model).
4. Incremental models.
5. Mixed scanning model.
6. The "garbage can" model.
7. Conflict model (Croisier model) .

Methodical tips to study the topic:

As part of mastering this topic, students should first familiarize themselves with the classical (normative) model, its basic concepts and assumptions. Attention should be paid to the methods on which the classical model is based. Familiarity with the administrative (descriptive) model and its assumptions is mandatory. It is important to familiarize yourself with the political model (Carnegie model), its basic concepts and decision-making scheme when applying the political model. As part of the study of this topic, the comparative characteristics of classical, administrative and political models should be considered.

An integral element of the study of this topic is the study of incremental models, the essence of logical incrementalism, its stages. It is necessary to investigate the peculiarities of the organization of the incremental process. It is also important to study the model of mixed scanning, its main phases. Students should understand the main features of the "garbage can" model. Croisier's conflict model also deserves attention.

Control questions and tasks:

1. Reveal the essence of the classic decision-making model?
2. What are the assumptions of the classic decision-making model?
3. State the basic concepts of the administrative model.
4. Describe the essence of Carnegie's political model.
5. Reveal the decision-making algorithm when applying the political model
6. Carry out a comparative analysis of classical, administrative and political models.

7. Reveal the essence of the incremental model.
8. What stages of logical incrementalism do you know?
9. What is the mixed scan model?
10. Reveal the essence of the "garbage can" model.
11. What is the essence of Croisier's conflict model?

Basic literature: 2,3,4.

Additional literature: 2,4,5,6,8,9,10.

Topic 5. Peculiarities and styles of making individual decisions

Content

1. Peculiarities of making individual decisions.
2. Individual decision-making styles.
3. Model of V. Vroom, F. Yetton and A. Jago.
4. Cynefin Framework model

Methodical tips to study the topic

When studying the first question of the topic the role of individual decisions should be explored. Students should clearly understand the essence of an individual decision, be able to classify them. Learning the factors influencing individual decisions is an integral part of studying this issue . It is necessary to consider the most common heuristics that affect individual decisions: availability heuristics, representativeness heuristics, heuristics of attachment and agreement. It is necessary to consider the advantages and disadvantages of individual solutions. As part of studying this topic, students should investigate the main styles of individual decision-making: impulsive, risky, balanced, cautious and inert styles, decision-making styles according to Rensis Likert (exploitative-authoritarian, supportive-authoritarian, consultative-democratic, participative), decision-making styles according to Alan Rowe (directive, analytical, conceptual, behavioral), decision-making styles according to K. Bruss, M. Driver, R. Larson and G. Uria, decision-making and management styles according to Yitzhak Azides. It is necessary to consider the continuum of seven styles according to R. Tennenbaum and U. Schmidt. It is advisable to consider the model of involving subordinates in decision-making by V. Vroom, F.

Yetton and A. Yago. Particular attention should be paid to decision-making styles in the Vroom, Yetton, and Iago models. Analysis of the Cynefin model is mandatory.

Control questions:

1. Reveal the essence of the individual solution
2. What types of individual administrative decisions do you know?
3. What heuristics influence individual decisions? Describe their impact.
4. State the advantages and disadvantages of individual solutions
5. What styles of making individual decisions do you know?
6. Reveal the essence of the continuum of seven styles according to R. Tennenbaum and U. Schmidt.
7. Describe the essence of the Cynefin model Framework.

Basic literature: 1,2,5.

Additional literature: 3,4,5,7,8.

Topic 6. Peculiarities of making and phenomena of group decisions

Content

1. Peculiarities of group decision-making.
2. Styles of group decision-making.
3. Phenomena of group decision-making.
4. Paradoxes of group thinking. .

Methodical tips to study the topic

First of all, it is necessary to find out the essence of the concept of group decision, their advantages and disadvantages. When studying this topic, students need to consider the principles and styles of group decision-making. The concept of "ritual mode" must be considered. Consider consensus, voting, and compromise. It is important to consider the phenomena of group decision-making: the phenomenon of group thinking, its symptoms, the phenomenon of group normalization, the phenomenon of group polarization, the phenomenon of social facilitation, the phenomenon of social laziness, the phenomenon of inadequate assessment of one's own participation, the phenomenon of social dominance, the phenomenon of idiosyncratic credit, the phenomenon of conformity, the phenomenon of inadequacy of judgment conviction. It is important to consider

recommendations for preventing the phenomenon of groupthink. Special attention should be paid to the paradoxes of group thinking: the paradox of Concorse, the paradox of Kenneth Arrow, the paradox of Abilene.

Control questions:

1. What is a group decision?
2. What are the advantages and disadvantages of group solutions?
3. Reveal the specifics of the dictatorial and ritual mode.
4. Discover the essence of consensus, voting and compromise.
5. What phenomena of group decision-making do you know?
6. What paradoxes of group thinking do you know?

Basic literature: 1,2,5.

Additional literature: 3,4,5,7,8.

Topic 7. Methods of management decisions grounding

Content

1. Methods of problem diagnosis.
2. Heuristic methods of idea generation, evaluation and decision selection.
3. Group heuristic methods of generating ideas, evaluating and choosing solutions.
4. Methods of expert evaluation and decision selection.
5. Logical and formalized methods of justifying decisions.
6. Game-theoretic methods of justifying decisions.
7. Multi-criteria methods of substantiating decisions.

Methodical tips to study the topic

When studying this topic, it is necessary to study the main methods of justifying management decisions. Particular attention should be paid to the methods of diagnosing the problem: the method of absolute, relative and average values, the comparison method, the grouping method, the index method, the elimination method, and break-even analysis. It is advisable to consider heuristic methods of generating ideas, evaluating and choosing a solution: the interview method, the questionnaire method, the method of waiting for inspiration, the Matchet method, and the method of eliminating hopeless situations.

Students should be able to identify group heuristic methods of generating ideas, evaluating and choosing solutions: the direct "brainstorming" method, the inverted "brainstorming" method, the discussion method, the analog method, the synectics method, the key question method, the free association method, the Delphi method, the method Pattern. It is mandatory to study the methods of expert evaluation and decision selection: the method of point evaluations, the method of absolute evaluations, the method of ranking, the method of relative evaluations, the method of pairwise comparisons (full pairwise comparisons and partial pairwise comparisons), methods of collective expert evaluation, the method of expert commissions, evaluation consistency of experts' judgments (correlation coefficient, rank correlation coefficient, Spearman's correlation coefficient, concordance coefficient and Pearson's test). It is necessary to study logic-formalized methods of justifying decisions: decision tree, sensitivity analysis, Monte Carlo method. An analysis of game-theoretic methods of justifying decisions is mandatory: scenario method, game theory methods, Monte Carlo method. It is important to consider multi-criteria methods of justifying decisions: direct method, compensation method, method of incomparability thresholds, axiomatic methods.

Control questions:

1. Classify the methods of diagnosing the problem.
2. What heuristic methods of idea generation, evaluation and decision selection do you know?
3. Specify the group heuristic methods of generating ideas that you know.
4. Reveal the essence of methods of expert evaluation and decision selection.
5. What logical and formalized methods of substantiating decisions do you know?
6. Classify multi-criteria decision justification methods.

Basic literature: 2,3,4.

Additional literature: 1,2,4,6,9,10.

Topic 8. Methods of management decisions evaluating

Content

1. Evaluation of management decisions.

2. Errors in making managerial decisions.
3. The effect of fatigue on decision-making .

Methodical tips for studying the topic:

As part of mastering this topic, students should first of all familiarize themselves with the concept of evaluating management decisions. Attention should be paid to the relationship between the quality and effectiveness of management decisions. Learning the aspects of the effectiveness of management decisions is mandatory. As part of the study of this topic, the components of management decision evaluation should be considered. An integral element of the study of this topic is the analysis of factors affecting the effectiveness of a management decision. Qualitative and quantitative performance indicators should be investigated. It is also important to study the organizational, economic, social, technological, environmental and legal effectiveness of management decisions. It is important to analyze errors when making management decisions. Students should be aware of the nature of decision fatigue and know the principles of overcoming the effect of decision fatigue.

Control questions and tasks:

1. What is the essence of evaluating management decisions
2. Reveal the essence of the relationship between the quality and effectiveness of management decisions
3. Describe the types of evaluations of management decisions.
4. Reveal the key aspects of the effectiveness of management decisions
5. What components of management decision evaluation do you know?
6. Specify the quality criteria of a management decision.
7. What factors affect the effectiveness of a management decision?
8. Specify qualitative and quantitative performance indicators.
9. What mistakes can be made when making managerial decisions?
10. What is the effect of decision fatigue?

Basic literature: 2,3,4.

Additional literature: 1,2,4,6,9,10.

Topic 9. Implementation of management decisions

Content

1. The process of implementing management decisions.
2. Distribution of responsibility for management decisions

Methodical tips to study the topic

When studying the first question of the topic, the concept of implementation of managerial decisions and its main stages should be studied: development of a plan for the implementation of a decision, management of the implementation of a decision, control of the implementation of a decision, assessment of the implementation of a decision. Students should clearly understand the essence of responsibility for managerial decisions and the principles of its distribution. Learning the essence of control over the implementation of management decisions and its types is an integral part of studying this issue. It is mandatory to analyze the difficulties of controlling the implementation of management decisions.

Control questions:

1. Reveal the algorithm for implementing management decisions.
2. What stages of implementation of management decisions do you know?
3. Reveal the essence of the distribution of responsibility for managerial decisions.
4. Specify the types of responsibility for the implementation of a management decision.
5. What difficulties do you know about controlling management decisions?

Basic literature: 1,2,5.

Additional literature: 2,4,5,6,7,9.

IV. GUIDELINES FOR PRACTICAL LESSONS

Practical lesson 1

Lesson content

Topic 1. Basics of managerial decision-making.

1. The essence and signs of management decisions.
2. Classification of management decisions.
3. Conditions for making managerial decisions.
4. Characteristics of the decision-making process.

Topic 2. Approaches to management decision-making

1. The rational approach.
2. The limited rational approach.
3. Intuitive approach.

Practical task:

Case: Decision-making in management and everyday life.

Case: Using approaches in making managerial decisions on the example of Southwest Airlines Co. _

Methodical tips for conducting classes

When working on topics 1 and 2 in a practical session, attention should be paid to establishing students' understanding of the essence and classification of management decisions, as well as the main approaches to making management decisions. Examining educational cases will help consolidate this knowledge in practice.

Basic literature: 1,2,5.

Additional literature: 3,4,6,7,9,10.

Practical lesson 2

Lesson content

Topic 3. Cognitive and psychological features of decision-making.

1. Cognitive basis of bounded rationality.
2. Heuristics and cognitive distortions in decision-making.

Topic 4. Management decision-making models

1. Classical (normative) model.
2. Administrative (descriptive) model.
3. Political model (Carnegie model).
4. Incremental models.
5. Mixed scanning model.
6. The "garbage can" model.
7. Conflict model (Croisier model) .

Practical task:

Business game: "Selective interview"

Case. "Limited rationality in decision-making"

Methodical tips for conducting classes

When working on topics 3 and 4 in a practical session, attention should be paid to establishing students' understanding of the cognitive and psychological features of decision-making, as well as the main models of management decision-making. Consolidating this knowledge in practice will help the consideration of an educational case and conducting the business game "Selective interview".

Basic literature: 2,3,4.

Additional literature: 2,4,5,6,8,9,10.

Practical lesson 3

Lesson content

Topic 5. Peculiarities and styles of making individual decisions .

1. Peculiarities of making individual decisions.
2. Individual decision-making styles.
3. Model of V. Vroom, F. Yetton and A. Jago.
4. Cynefin Framework model

Practical tasks:

- ✓ Consider the Kepnert-Trego decision-making model.
- ✓ Perform a practical task using the model.

Methodical tips for conducting classes

When working on topic 5 in a practical session, attention should be paid to establishing in students an idea about the peculiarities of individual decision-making. To consolidate this knowledge in practice, consideration of the Kepnert-Trego decision-making model and the implementation of a practical task using this model will help.

Basic literature: 1,2,5.

Additional literature: 3,4,5,7,8.

Practical lesson 4

Lesson content

Topic 6. Peculiarities of making and phenomena of group decisions.

1. Peculiarities of group decision-making.
2. Styles of group decision-making.
3. Phenomena of group decision-making.
4. Paradoxes of group thinking. .

Practical tasks:

- ✓ Build your own management profile, determine and analyze the decision-making style according to Alan Rowe's method, using the service: <https://ioe.hse.ru/cdle/rowe> .
- ✓ Prepare a presentation based on the results of the analysis and comment on them.

Methodical tips for conducting classes

When working on topic 6 in a practical session, attention should be paid to students' ideas about the peculiarities of group decision-making. Practical tasks will help students build their own management profile and analyze decision-making style according to Alan Rowe's methodology.

Basic literature: 1,2,5.

Additional literature: 3,4,5,7,8.

Practical lesson 5

Lesson content

Topic 7. Methods of management decisions grounding

1. Methods of problem diagnosis.

2. Heuristic methods of idea generation, evaluation and decision selection.
3. Group heuristic methods of generating ideas, evaluating and choosing solutions.
4. Methods of expert evaluation and decision selection.
5. Logical and formalized methods of justifying decisions.
6. Game-theoretic methods of justifying decisions.
7. Multi-criteria methods of substantiating decisions.

Practical tasks:

Case: Substantiation of the managerial solution to the problem at Blue Corporation Jay
Air

Methodical tips for conducting classes

When working on topic 7 in a practical session, attention should be paid to students' ideas about the methods of management decisions grounding. Educational case about decision-making at the Blue Jay Air company will help students to understand these methods and they will learn how to use them.

Basic literature: 2,3,4.

Additional literature: 1,2,4,6,9,10.

Practical lesson 6

Lesson content

Topic 8. Methods of management decisions evaluation.

1. Evaluation of management decisions.
2. Errors in making managerial decisions.
3. The effect of fatigue on decision-making .

Practical tasks:

Case: Evaluating management decisions in Frenz Corporation

Methodical tips for conducting classes

When working on topic 8 in a practical session, attention should be paid to students' ideas about the methods of management decisions evaluating. Considering an educational case about decision-making at the Frenz Corporation will help to give the students necessary skills of decisions evaluation.

Basic literature: 2,3,4.

Additional literature: 1,2,4,6,9,10.

Practical lesson 7

Lesson content

Topic 9. Implementation of management decisions.

1. The process of implementation of management decisions.
2. Distribution of responsibility for management decisions

Practical tasks:

Implementation of management decisions on the example of Darwin Life Insurance Company

Methodical tips for conducting classes

When working on topic 8 in a practical session, attention should be paid to students' ideas about the methods of evaluation of management decisions. Considering an educational case about decision-making at the Darwin Life Insurance Company will help students to create necessary skills for evaluation of management decisions.

Basic literature: 1,2,5.

Additional literature: 2,4,5,6,7,9.

Practical lesson 8

Defence of calculation work.

Practical lesson 9

Modular control work

V. INDIVIDUAL WORK OF STUDENTS

Individual work for students is mandatory for the formation of thorough knowledge of the discipline and the acquisition of practical skills in mastering the skills of analyzing alternatives when making a management decision, its justification and evaluation of a management decision. Independent work includes the following components: study of lecture material, preparation for practical classes studying the mandatory and additional scientific literary sources, preparation of calculation work and study of issues submitted for independent study.

The plan envisages 54 hours of individual student work (ISW). It covers the preparation of students for practical classes and independent performance of calculation work, educational calculation and analytical tasks, business games and cases. The distribution of students' individual work by course topics is given in the table.

Week	The subject	ISW	Types of work**
1-2	Basics of managerial decision-making	6	R, N
3-4	Approaches to making managerial decisions	6	R, N, T
5-6	Cognitive and psychological features of decision-making	6	R, N
7-8	Models of managerial decision-making	6	R, N, MCW-1
9-10	Features and styles of individual decision-making	6	R, N
11-12	Peculiarities of making and phenomena of group decisions	6	R, N, T
13-14	Methods of management decisions grounding	6	R, N, MCW-2
15-16	Methods of management decisions evaluation	6	R, N, CW
17-18	Implementation of management decisions	6	R, N, CCW
Together		54	

* L - lectures, P - practical classes, ISW - independent work of students;

** P - work in practical classes, T - testing, MCW - modular control work, CW - calculation work; CCW - credit control work.

V.1. Questions and tasks for individual study of the discipline

Topic 1.

- ✓ Analyze one of the most significant decisions that the student had to make during the last year (for example, admission to the master's program). Classify solutions according to all the outlined features. Structure the decision-making process and define the content and outcome of each step.
- ✓ Familiarize yourself with H. Simon's articles: https://seinst.ru/files/vehi_2_simon_decision-making.pdf , https://igiti.hse.ru/data/003/314/1234/3_1_2_Simon.pdf .

Topic 2.

- ✓ Consider the case "approaches in making a decision in Big Ben Bank »

Topic 3.

- ✓ Study the principles of decision-making in Sales management reading the monograph Tony Hsieh “*Delivering Happiness*” <https://allbookshub.com/delivering-happiness-pdf/>

Topic 4.

- ✓ Consider the prospective theory model. Give examples of the application of the theory in making managerial decisions.
- ✓ Give examples demonstrating the use of heuristics and cognitive distortions when making management decisions (except for those discussed in the lecture). Ground and explain your choice.

Topic 5.

- ✓ Consider a case study on the topic: “Making an individual decision by the management of Blue Ocean P & C Company”

Topic 6.

- ✓ Consider a case study on the topic: “Making a group decision when solving the Dynasty problem Corporation”

Topic 7.

- ✓ Give examples that demonstrate the application of methods of justifying management decisions (except for those discussed in the lecture). Explain your choice.

Topic 8.

- ✓ Give examples demonstrating the use of management decision evaluation methods (except for those discussed in the lecture). Ground and explain your choice.

Topic 9.

- ✓ Consider the article by Marwa El Zein , Bahador Bahrami , Ralph Hertwig " Shared Responsibility in Collective Decisions" <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6570616/#:~:text=As%20suggested%20before,%2C%20a%20collective,without%20surrendering%20their%20autonomy%20altogether.>
- ✓ Give examples from your own experience regarding the distribution of responsibility for decisions .

V.2. Methodical instructions for performing calculation work

Tasks as part of the calculation work: Analyze the activities of a real existing domestic enterprise (preferably the one that the student will research in the master's thesis, and which will be the basis of the internship) and complete the task according to the given structure.

5.2.1. Characteristics of the enterprise

Provide a comprehensive description of the enterprise (in the absence of comprehensive information about the enterprise, it is advisable to use materials from the web). Summarize the characteristics in the form of a table (Table 1).

Table 5.1 - Characteristics of the enterprise

1. Name, organizational and legal form of the enterprise	
2. Information about the manager and founders	
3. Date of creation and specifics of functioning	

4. Main types of activities and range of products (services)	
5. Characteristics of the sales market	
6. Key competitive advantages	

5.2.2. Identification of the problem situation and formulation of the problem

A problematic situation is a critical inconsistency between the desired and actual state of the enterprise. Awareness of a problematic situation consists in establishing the fact of its existence based on the results of activities or research of market opportunities.

A problem is a task formulated on the basis of a problematic situation for finding management solutions. The problem that has reached a certain value is transformed into a motive for the enterprise's activity.

The formation of management decisions begins with the procedure of analyzing the problem situation and formulating the problem.

The problems of the zero level (the level of the enterprise as a whole) are mainly analyzed - the most important problems of improving management for the entire enterprise. If there are few problems at the zero level, it is possible to additionally include in the number of analyzed problems the problems of the first level of structuring (the level of structural divisions) - the most important problems of improving the management of individual divisions of the enterprise.

The problematic situation should be defined quite specified. It is impossible to allow generalized definitions of problem situations that practically completely repeat the content of the relevant management function.

For example, it is inappropriate to allow wording such as: "The organizational structure of management does not correspond to modern business conditions." This definition of the problem situation is too general. It is necessary to specify exactly which requirements, what exactly in the organizational structure does not meet. Accordingly, on the basis of such identification of a problematic situation, a problem is defined as the one that determines the direction of improvement of the organizational structure.

For further processing, one problem situation is identified and one specific problem is defined. It is advisable to describe the problem according to the given scheme in the form of a table (Table 2).

Table 5.2 – Identification of the problem situation
and definition of the problem

1. Identified problem situation	
2. Internal factors that led to the emergence of a problematic situation	2.1.
	2.2.
	...
3. External factors that led to the emergence of a problematic situation	3.1.
	3.2.
	...
4. The main immediate causes of the problem	4.1.
	4.2.
	...
5. The essence of the problem	
6. Time of occurrence and duration of the problem	
7. Novelty of the problem	
8. The level of the problem (enterprise or its separate divisions - specify which ones)	
9. The trend of problem development over time	
10. The main consequences of the problem	
11. Sources of information on the basis of which the problem is determined	
12. The degree of completeness and reliability of the information on the basis of which the problem is defined	

5.2.3. Structuring the problem

To structure the problem, it is advisable to use the problem tree building tools (Fig. 1).

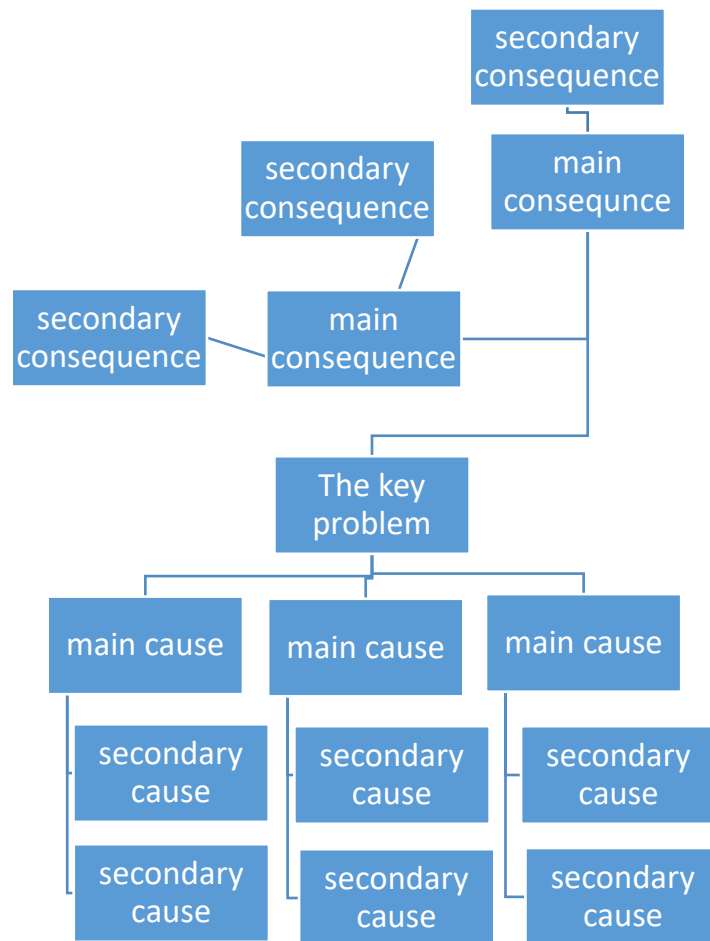


Figure 1 – Problem tree structure

The construction of the structure of the problem determines the rational sequence of their solution from the point of view of the cause-and-effect relationship and the possibility of maximum use of the influence of the partial or complete solution of the previous problems on the more complete solution of the following problems.

To build a problem tree, it is advisable to use templates and online services that greatly simplify the procedure (for example, <https://creately.com/diagram/example/hsdtgivw/problem%20tree>, <https://www.visme.co/tree-diagram-maker> or others).

The identification of the problem and determining the reasons that caused it allow creating the necessary basis for the development and implementation of management decisions to solve it.

5.2.4. Definition of goals

5.2.4.1. Formation of goals

The goal is an expression of the desired state of the result of the activity.

The set of possible goals can be divided into two classes: finite (final, terminal) and infinite (endless). Finite goals characterize a completely certain result that must be achieved in time and space. The choice of one or another class of objectives depends on the nature of the problem.

The procedure of forming the goals of the problem solving is carried out by decision-maker's logic. The use of any formal methods for defining a list of goals for solving social and economic problems of the enterprise is practically excluded. When formulating the goals, almost the entire amount of knowledge and experience of the person is used.

1. The goals of solving the problem should provide for the achievement of certain economic effects due to an increase in income (such goals are characterized by increasing production output, improving its quality, producing new products with high consumer properties, mastering a new market, etc.) and (or) reducing the costs of obtaining them (such goals characterize the reduction of various types of resources: labor, material, energy, financial, informational, etc.).
2. The vast majority of goals determined to solve the formulated problem should be specific, quite certain and, therefore, finite.
3. Goals are defined meaningfully and must be expressed in a clear and compact form.
4. The goals should be related to the identified causes of the problem and aimed at their elimination.
5. The defining of goals should have a clearly expressed imperative character.
6. Verbal defining of goals is a necessary but not sufficient condition for goal setting.
7. To specify goals, it is necessary to determine their characteristics: criteria for achieving goals, indicators of the degree of goal achievement, and priorities.

One of the most common mistakes in defining goals is the substitution of valid goals in the form of scope of work. Formulating the goal in the form of a volume of work can lead to the fact that the best achievement becomes the largest volume of work.

To determine the main goal, a complete list of goals is compiled, and then, based on the quantitative and qualitative characteristics of each of them, the priority of one specific one is revealed. Prognostic substantiation of the goal is very important at this stage. Predictive research should be aimed at determining the reality of achieving the goal and at finding means and ways to achieve it.

5.2.4.2. Determination of indicators, criteria and limitations for achieving goals

Indicators of goal achievement are measures or signs by which the fulfillment of goals is determined.

Criteria for achieving goals are indicators in qualitative or quantitative form, which mean the achievement of goals. According to these criteria, alternative solutions for achieving goals are subsequently evaluated.

Goal priorities - assessment of the importance of the goal in solving the problem situation.

The relationship between indicators and criteria for achieving goals is the following: indicators reflect measures to measure goals and criteria are values or intervals on indicator measurement scales (measured indicators).

Measurement of indicators and their comparison with criteria determines the degree of closeness to achieving goals and subsequently characterizes the value of a management decision. Achieving one goal can be characterized by several indicators and criteria.

To determine the priorities of the goals, at first it is advisable to determine the most important of them and assign it the highest priority. Next, by sequentially comparing the criteria in pairs, determine the priority of each of the following goals.

Multiple targets can have the same priority.

Constraints are conditions that reflect the influence of external and internal factors that must be taken into account when making decisions.

Constraints complement goals. Along with the determination of goals, it is important to determine the significant limitations that affect the choice of a decision.

The most characteristic limitations of an economic nature are resources, therefore it is necessary to determine the available amount of resources in the form of limitations. Such restrictions allows rejecting those that are clearly unacceptable even at the stage of determining decision options.

It is necessary to define at least 5 goals. It is advisable to describe the goals according to the given scheme in the form of a table (Table 3).

Table 3 – Characteristics of the goals of management decision-making

Priority of goal C_g	Target	The causes of the problem which the goal is associated with	Limitation	Goal achievement indicator	Goal achievement criteria (value or range)					Target weight ω_g
					Totally achieved	Mostly achieved	Average achieved	Partially achieved	Not reached	
	Ts ₁ - ...									
	Ts ₂ - ...									
...

Please note: under the proposed approach, the target with the highest priority value is the highest priority!

Transferring the priority of the goal into weight (significance):

$$\omega_g = \frac{C_g - C_{min}}{C_{max} - C_{min}} \quad (1)$$

C_g – the priority of the gth goal, defined in table 3;

C_{min} – the minimum priority value ($C_{min} = 1$);

C_{max} – the maximum priority value.

Converting the importance of the goal into weight (weighted importance):

$$|\omega_g| = \frac{\omega_g}{\sum \omega_g} \quad (2)$$

Please note: under the proposed approach, the target with the highest priority value is the highest priority!

5.2.5. Defining a set of alternative solutions

In order to be effective, the solution must meet a number of requirements:

1. To be realistic, that is, to proceed from achievable goals, available resources and time.
2. Contain a description of the implementation mechanism.
3. Be resistant to possible errors in the definition of the original data.
4. To be accepted and executed in real time of the processes on which it is oriented.
5. To be flexible, that is, to be able to change the goal and (or) the algorithm for achieving the goal when external or internal conditions change.
6. Provide for the possibility of verification and control of execution.

It is necessary to define at least 5 alternative solutions. Each of the decisions is considered as a separate project that requires the involvement of resources, must contribute to the achievement of the selected goals and meet the limitations.

Table 5.4 – Characteristics of alternative solutions

An alternative solution	Content of the decision	Implementati on period	Amount of funding	Income from sale	Other characteristics
A ₁					
A ₂					
...					

5.2.6. Determination of indicators and criteria for evaluating the effectiveness of alternative solutions

The decision efficiency criteria should be formed on the basis of a set of indicators characterizing the quality and effectiveness of the adopted decision.

The effectiveness of management decisions is determined by a set of quantitative and qualitative indicators of a technical-technological, socio-economic and organizational nature. The set of indicators is determined by the person, who takes the decision.

One of the most important indicators of evaluating the effectiveness of alternative solutions can be an indicator of the degree of achievement of goals (it is advisable, but not necessary, to assign it the highest priority in the set of criteria for evaluating alternative solutions).

It is also necessary to define other indicators and criteria for evaluating alternative solutions. In particular, decisions can be evaluated using performance indicators of investment projects, such as net (discounted or not) income, ROI, (discounted or not) payback period, internal rate of return, etc.

First, the most priority indicator should be determined. Next, by sequentially comparing indicators in pairs, the priority of each of the following is determined. Several metrics can have the same priority. The weight of the indicator $|w_j|$ is determined similarly to the weight of the target $|\omega_g|$ according to formulas (1)-(2) depending on the priority of the indicator determined by the person who takes decisions.

It is necessary to determine at least 5 indicators. It is advisable to describe them according to the given scheme in the form of a table (Table 4).

Table 5.5 – Indicators and criteria for evaluating alternative solutions

Criterion priority	Indicator	Matching criteria (value or interval)					The weight of the indicator $ w_j $
		The best value	High value	Average value	An acceptable value	Invalid value	
	K_1 – Degree of achievement of set goals	X	X	X	X	X	
	$K_2 - \dots$						
...							

5.2.7. Evaluation of alternative solutions and selection of the optimal one

To choose the optimal management solution, it is necessary:

1. Consider a set of alternative solutions-projects - options for solving the previously identified problem in accordance with the determined goals.
2. Describe the differences in schemes or procedures for implementing the proposed solutions.
3. Determine the value of indicators for each of the alternative solutions (table 4) in units of measurement of indicators.
4. Determine the scale estimates of the indicators for each of the alternative solutions.

To determine the score of an alternative solution based on the indicator of goal achievement as a result of its implementation, it is advisable to use a scale of 0-4 points according to the criteria defined in Table 3 (the alternative is evaluated separately for each goal):

- the goal is achieved completely - 4 points;
- the goal is mostly achieved - 3 points;
- the goal was achieved on average - 2 points;
- the goal is partially achieved - 1 point;
- the goal is not achieved - 0 points.

Then the total assessment of each alternative decision according to the indicator K_1 - Degree of achievement of the set goals, that is defined as the average weighted assessment of the decision according to the full set of goals.

To determine the score of an alternative solution based on other indicators, it is advisable to use a similar scale of 0-4 points according to the criteria defined in Table 3:

- the alternative provides the best indicator value – 4 points;
- the alternative provides a high value of the indicator - 3 points;
- the alternative provides an average value of the indicator - 2 points;
- the alternative provides an acceptable value of the indicator - 1 point;
- the alternative does not provide an unacceptable value of the indicator - 0 points.

5. To evaluate alternatives and make decisions, it is advisable to apply the heuristic method of the SMART group (Simple Multi Attribute Rating Technique). The SMART method is one of the simplest methods of multi-criteria assessment. The idea of the method is to calculate the total value $u(A_i)$ of each alternative A_i as a weighted sum of the private values of the alternative according to each criterion:

$$u(A_i) = \sum |w_j| u_j(A_i) \quad (3)$$

$|w_j|$ – the weight of the K_j indicator ;

$u_j(A_i)$ – scale evaluation of the alternative A_i according to the K_j indicator .

The results of the evaluation of alternative solutions should be gathered in the table (Table 5).

Table 6 – Evaluation of alternative solutions by the SMART method

Evaluation indicators K_j		K_1	K_2	...	Σ
Indicator content		The degree of achievement of the set goals			
The weight of the indicator w_j					100 %
A_1	Evaluation in measurement units				X
	Scale assessment				X
	Weighted score				
A_2	Evaluation in measurement units				X
	Scale assessment				X
	Weighted score				
...	Evaluation in measurement units				X
	Scale assessment				X

	Weighted score				
--	----------------	--	--	--	--

6. The alternative solution with the highest total score is defined as the most rational.
7. If the most rational solution has an overall score that is significantly higher compared to other alternative solutions and at the same time satisfies the person, who takes decisions, it is chosen as the best and, after checking for errors, is accepted for implementation.
8. If several alternative solutions have the same or similar overall values, the solution that satisfies the person, who takes decisions as completely as possible is chosen. After additional verification of the decision based on performance indicators and for the presence of errors, it is accepted for implementation.

V.3. Tasks for self-testing of knowledge

Tests

1. What is the ultimate goal of a management decision?
 - a) ensuring the choice of an alternative that most rationally ensures the achievement of the organization's goals;
 - b) ensuring the choice of an alternative that optimally ensures the achievement of the organization's goals and satisfies the manager;
 - c) provision of coordinating influence on the object of management to achieve the goals of the organization;
 - d) ensuring organizational conditions for achieving the goals of the organization.

2. Which of the listed characteristics does not depend on the degree of programmability of the solution?
 - a) level of decision-making skills;
 - b) degree of complexity and structure of the problem;
 - c) availability of decision-making algorithms;
 - d) number of decision-makers.

3. What type of solutions does not exist according to H. Mintzberg's classification?

- a) decisions on business organization;
- b) decision on employment of employees;
- c) decisions on resolving conflicts and eliminating problems;
- d) decisions on conducting negotiations.

4. Name the conditions for making management decisions, under which there are several possible outcomes of such decisions, the probability of each of which can be determined with a greater or lesser degree of objectivity using probabilistic methods or statistical analysis?

- a) certainty;
- b) uncertainty;
- c) risk;
- d) *ambiguity* .

5. How many stages does the traditional development and adoption process include?

- a) 5 stages;
- b) 6 stages;
- c) 7 stages;
- d) 8 stages.

6. Which of the following statements about programmable solutions is incorrect?

- a) structured problems can be solved by making programmed decisions;
- b) the less structured the problems, the more difficult it is to solve them by making programmed decisions;
- c) programmed solutions prevail at lower levels of the organizational hierarchy;
- d) programmed solutions require the application of innovative ideas and approaches.

7. What is the name of the observed effect, when excessive analysis of the situation leads to a loop in making a decision and it is not taken at all?

- a) rational ignorance;
- b) analysis paralysis;
- c) effect of ownership;
- d) framing effect.

8. Which of the following is not one of the disadvantages of a rational approach to decision-making?

- a) inflexibility;
- b) a high degree of abstraction and simplification of reality;
- c) inability to adequately take into account non-quantifiable values;
- d) complication of optimal decision-making due to norms established in the organization.

9. Which of the following statements about rational decisions is incorrect?

- a) a rational decision is made based on the strict logic of the search process;
- b) a rational decision is based on the use of scientific methods of analysis and does not depend on the past experience of the person, who takes decisions;
- c) a rational solution is chosen on the basis of all the information of the person, who takes decisions;
- d) the choice of a rational decision is based on the methods of determining the expected value of each of its alternative options.

10. Which of the following is not one of the disadvantages of a boundedly rational approach to decision-making?

- a) instability of preferences;
- b) dependence on restrictions of various types and levels;
- c) a high degree of abstraction and simplification of reality;
- d) cognitive distortions and psychological features of the person, who takes decisions.

11. Which of the listed restrictions do not work under conditions of bounded rationality?

- a) cognitive limitations;
- b) information restrictions;
- c) analytical limitations;
- d) resource limitations.

12. Which of the following signs is not inherent in a rational decision?

- a) all the advantages of alternatives to such a decision are unambiguous and clear;
- b) when analyzing alternatives, personal values and group norms do not affect the person, who takes decisions;
- c) the chosen alternative maximizes the profit;
- a) the choice of an alternative is influenced by cognitive, information and resource limitations.

13. Which of the researchers was the first who has defined the cognitive foundations of bounded rationality?

- a) Richard Thaler;
- b) Henry Mintzberg;
- c) Daniel Kahneman;
- d) Charles Lindblom .

14. What type of thought processes of the person, who takes decisions, does reflect a person's goals and beliefs and guides a set of intellectual tools used in decision-making?

- a) autonomous thinking;
- b) algorithmic thinking;
- c) reflective thinking;
- d) intuitive thinking.

15. What are the subconscious techniques used by the person, who takes decisions to simplify the process of analyzing complex situations and decision-making rules?

- a) alogisms;
- b) heuristics;
- c) unsystematic errors;
- d) cognitive distortions.

16. Which of the following signs is not inherent in the system of decision-making according to D. Kahneman's theory?

- a) cognitive ease;
- b) data coherence;
- c) constant automatic activity;
- d) the ability not to mix ideas about the real world with imaginary situations.

17. What is the name of the effect that is observed in decision-making and is displayed as that people value the things they own more than the things they can get?

- a) simplification effect;
- b) effect of ownership;
- c) anchoring effect
- d) credibility effect.

18. What is the name of the intuitive technique that is used by the person in decision-making and is manifested in the assessment of the probability of an event by the degree of ease associated with these events?

- a) availability heuristics;
- b) representativeness heuristic;
- c) binding heuristics;
- d) agreement heuristics.

19. Which model of decision-making is based on the assumption that any reforms in the organization should be carried out gradually through the implementation of a series of small interconnected transformations?

- a) incremental process model;
- b) logical incrementalism;
- c) private incrementalism;
- d) independent incrementalism.

20. Which model of decision-making is characterized by such basic application conditions as the presence of an unstructured problem and ambiguous, unknown or inconsistent goals?

- a) classical (normative) model;
- b) administrative (descriptive) model;
- c) political model (Carnegie model);
- d) incremental model.

21. Which of the following elements of decision-making are not the part of the "garbage can" model?

- a) problems;
- b) solutions;
- c) participants;
- d) conditions.

22. Which of the following decision-making models is used to make unprogrammed coalition decisions in conditions of uncertainty and limited information?

- a) classical (normative) model;
- b) administrative (descriptive) model;
- c) political model (Carnegie model);
- d) incremental model.

23. Which of the listed models provides for the division of problems, for the solution of which decisions are made, into soft and hard?

- a) incremental process model;
- b) logical incrementalism;
- c) private incrementalism;
- d) independent incrementalism.

24. Which decision-making model is based on the assumption that management decisions in organizations are always made in conditions of uncertainty, the source of which can be not only the external environment, but also the behavior of the organization's members themselves, who are trying to improve their situation?

- a) "garbage can" model;
- b) political model (Carnegie model);
- c) conflict model (Croisier model);
- d) mixed scanning model.

25. Which of the following heuristics does not affect the process of making administrative decisions?

- a) availability heuristics;
- b) representativeness heuristic;
- c) non-involvement heuristic;
- d) binding heuristics.

26. What type of administrative decisions does not exist?

- a) collegial decision;
- b) individual decision;
- c) participatory decision;
- d) authoritarian decision.

27. Which of the following features is not inherent in an individual decision?

- a) responsibility for the results of the decision relies on one person;
- b) the decision must be approved by those who will implement it;
- c) the choice of decision is influenced by the limited judgments of mainly one person who takes the decision;
- d) decision-making requires relatively little time.

28. What style of individual decision-making is characterized by the fact that the stage of generating alternatives significantly outweighs the stage of their analysis and adjustment?

- a) inert;
- b) cautious;
- c) risky;
- d) impulsive.

29. According to Alan Rowe's classification, what decision-making style is characteristic of managers who have high cognitive abilities, developed intuition and tend to carefully study the tasks and consider many alternatives?

- a) behavioral;
- b) directive;
- c) analytical;
- d) conceptual.

30. According to the classification of Yitzhak Azides, what type of managers are able to foresee the problems of the organization and ensure the long-term efficiency of its functioning?

- a) producer;
- b) administrator;
- c) an entrepreneur;
- d) integrator.

VI. CURRENT AND FINAL CONTROL

Since the semester control of the discipline is provided in the form of credit, the rating is formed as the sum of all the rating points received during the semester.

1. The student's rating consists of the points he receives for the following types of work:
 - work in practical classes (P) - involves participation in a discussion of issues and solving problems (the estimated number of student answers during the semester is 4, weighted score is 5);
 - performance of educational tasks (H) - involves the presentation of computational and analytical tasks, business games and cases completed independently and (or) in groups (the estimated number of student answers during the semester is 5, the weighted score is 5);
 - passing the test (T) - is conducted at the beginning of the practical session after completing the study of a certain section (number of tests - 2, weighted score - 5).
 - execution of a modular test (MKR) - divided into two parts (two written papers) lasting one academic hour each (MKR-1, MKR-2), performed in practical classes during the 1st and 2nd calendar control (number of works – 2, weight point – 15);
 - performance of estimated work (RR) - involves written execution, presentation and defense of the work (number of works - 1, weight point - 15).

A condition for positive passing of the first calendar control is that the student receives at least 20 points at the time of its conduct.

The condition for positive passing of the second calendar control is to obtain at least 35 points.

The maximum rating of a student is 100 points.

Students who have a rating of at least 60 points receive a corresponding positive evaluation without additional tests.

2. Semester control in the form of writing a credit control paper (KKR) is conducted for students who have a rating of less than 60 points, as well as those who want to improve their rating. In this case, the points earned by the student during the semester are canceled.

The final test consists of the following tasks:

- disclosure of theoretical questions (number of questions – 4, weighted score – 5);
- performance of test tasks (number of tasks – 40, weight point – 1);
- performance of calculation and analytical tasks (number of tasks – 4, weighted score – 10).

The maximum credit score is 100 points.

The maximum grade for the course is 100 points.

Table of correspondence of rating points to grades on the university scale:

Scores	Rating
100-95	Excellent
94-85	Very good
84-75	Good
74-65	Satisfactory
64-60	Sufficiently
Less than 60	Unsatisfactory
Admission conditions not met	Not admitted

VII. EDUCATIONAL AND METHODOLOGICAL MATERIALS

7.1. Basic literature:

1. Bonanno G. Decision Making. University of California. 2017. 317 p.
<http://faculty.econ.ucdavis.edu/faculty/bonanno/Books.html>
2. Bonanno G. Uncertainty, risk and information: economic analysis. University of California. 2019. 415 p.
http://faculty.econ.ucdavis.edu/faculty/bonanno/URI_Book.html
3. Practical Decision Making [electronic resource]: An Introduction to the Analytic Hierarchy Process (AHP) Using Super Decisions V2 / by Enrique Mu, Milagros Pereyra-Rojas. Cham: Springer International Publishing: 2017. 111 p.
4. Systemic Decision Making [electronic resource]: Fundamentals for Addressing Problems and Messes / by Patrick T. Hester, Kevin Mac G. Adams. Cham: Springer, 2017. 414 p.
5. Thomas Richards Problem Solving: Best Strategies to Decision Making, Critical Thinking and Positive Thinking. 2015. 112 P. <https://www.pdfdrive.com/problem-solving-best-strategies-to-decision-making-critical-thinking-and-positive-thinking-e165918103.html>

7.2. Supporting literature:

1. Albright C. and Winston W. L. Business analytics: Data Analysis and Decision Making, Fifth Edition S. Cengage Learning, 2015. 1180 p.
<https://www.pdfdrive.com/business-analytics-data-analysis-decision-making-d185805929.html>
2. Bonanno G. Game Theory. University of California. 2nd Edition. 2018. 592 p.
http://faculty.econ.ucdavis.edu/faculty/bonanno/GT_Book.html
3. Chip Heath, Dan Heath Decisive: How to Make Better Choices for life and work. 2013. 296 P. <https://www.pdfdrive.com/decisive-how-to-make-better-choices-in-life-and-work-e159432568.html>

4. Games, Strategies and Decision Making. 2012. 587 p.
<https://www.pdfdrive.com/games-strategies-and-decision-making-e20330730.html>
5. Hester, Patrick T. Solving Complex Decision Problems: A Heuristic Process / by Rudolf Grünig, Richard Kühn. 4th ed. Berlin: Springer, 2017. 193 p
6. Marr B. Big data Using SMART Big Data, Analytics and Metrics To Make Better Decisions and Improve Performance. 2015. 259 p. <https://www.pdfdrive.com/big-data-using-smart-big-data-analytics-and-metrics-to-make-better-decisions-and-improve-performance-e181764605.html>
7. Simon Bradley, Nicole Price Critical Thinking: Proven Strategies To Improve Decision Making Skills, Increase Intuition And Think Smarter. 2016. 97 p. <https://www.pdfdrive.com/critical-thinking-proven-strategies-to-improve-decision-making-skills-increase-intuition-and-think-smarter-e194735486.html>
8. Richards T. Problem solving: Best strategies to decision making, critical thinking and positive thinking. 2015. 112 p. <https://www.pdfdrive.com/problem-solving-best-strategies-to-decision-making-critical-thinking-and-positive-thinking-d165918103.html>
9. Shuster S. The Art Of Thinking In Systems: Improve Your Logic, Think More Critically, And Use Proven Systems To Solve Your Problems - Strategic Planning For Everyday Life. 2018. 83 p. <https://www.pdfdrive.com/the-art-of-thinking-in-systems-improve-your-logic-think-more-critically-and-use-proven-systems-to-solve-your-problems-strategic-planning-for-everyday-life-d195092479.html>
10. Waller B.N. Critical thinking: consider the verdict. 6th edition. Pearson. 2012. 472 p.
<https://www.pdfdrive.com/critical-thinking-consider-the-verdict-sixth-edition-d20051184.html>

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL TECHNICAL UNIVERSITY OF UKRAINE
"IHOR SIKORSKY KYIV POLYTECHNIC INSTITUTE"
Faculty of Management and Marketing
Department of Enterprise Management**

CALCULATION WORK
on the discipline

" Managerial decision making "

Student of group __ __
specialty 073 "*Management*"

Ivanenko Ivan _____
(surname and initials)

Head _____
(position, academic title, scientific degree, surname and
initials)

Score: _____

KYIV-202_