

MANAGERIAL DECISIONS

COURSE SYLLABUS

Code and name of specialty	073 – Management	Institute	Institute of Education and Science in Economics, Management and International Business
Program name	Management of Organizations and Administration	Department	Management
Type of program	Educational and Professional	Language of instruction	English

LECTURER

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PhD in Physics & Mathematics, Master's degree in Management, associate professor, associate professor of the Management department (NTU "KhPI")
 Authored and co-authored over 100 scientific publications. Teaches courses: «Organization theory», «Decision making in business», «Managerial decisions», «Marketing management», «Business ethics and social responsibility», «Basics of scientific research»

GENERAL DESCRIPTION OF THE COURSE

Summary	The course aims at introducing students to decision theory: models and approaches to decision making, mathematical tools that can be applied in the process of formal assessment and selection of decision alternatives. The ultimate goal of the course is to provide students with knowledge and develop their practical skills related to making and implementation of organizational decisions at different levels of management with a view to achieving organizational goals.
Course objectives	<ul style="list-style-type: none"> • to familiarize students with qualitative and quantitative decision making tools; • to help students develop the ability to assess the decision situation and choose appropriate approaches to decision making and implementation; • to show the role of data analysis in decision making; • to help students build on their Excel skills essential for effective decision making
Types of classes and control	Lectures, practical classes, term paper. The course ends with a final exam
Term	6

Student workload (credits) / Type of course	5/ Elective	Lectures (hours)	24	Practical classes (hours)	24	Self-study (hours)	102
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Program competences	GC08. The ability to use information and communication technology GC11. The ability to adjust to a new situation and take action GC12. The ability to generate new ideas (creativity). SC03. The ability to identify prospects for organizational development.
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SC08. The ability to plan an organization's activities and manage time.
 SC09. The ability to work in a team and establish interpersonal interaction when solving professional tasks.
 SC10. The ability to assess how work is performed, ensure work quality and motivate the organization's personnel.
 SC12. The ability to analyze and structure organizational problems, make informed and justified decisions
 SC1.1. The ability to collect and process primary accounting and managerial information; understand and be capable of applying accounting and auditing systems
 SC1.2. The ability to formulate the main tasks related to the implementation of the risk management system in an organization
 SC1.3. Understanding business ethics principles and using them in professional activities.

Learning outcomes	Teaching and learning methods	Forms of assessment (continuous assessment CAS, final assessment FAS)
LO 04. To demonstrate the ability to identify problems and justify managerial decisions	Interactive lectures with presentations, discussion-based learning, case-based learning, problem solving	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), mid-term control (CAS), defense of the term paper (FAS), final exam (FAS)
LO 06. To show the ability for searching for, collecting and analyzing information, calculating metrics for justifying managerial decisions	Interactive lectures with presentations, discussion-based learning, case-based learning, problem solving, project-based learning (term paper)	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), mid-term control (CAS), defense of the term paper (FAS)
LO 07. To show the ability to design an organization	Interactive lectures with presentations, discussion-based learning, case-based learning,	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), mid-term control (CAS), final exam (FAS)
LO 09. To demonstrate interaction, leadership, and teamwork skills	Interactive lectures with presentations, discussion-based learning, case-based learning, collaborative-learning, student-peer feedback	A written group assignment with subsequent in-class presentation (CAS), assessment of the meaningful contribution to in-class discussions (CAS)
LO 12. To assess the legal, social, and economic effects of an organization's activities	Interactive lectures with presentations, discussion-based learning, case-based learning	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), mid-term control (CAS), final exam (FAS)
LO 16. To demonstrate the ability for independent work, flexible thinking, openness to new knowledge, criticism and self-criticism	Project-based learning (term paper), case-based learning, discussion-based learning, student-peer feedback	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), defense of the term paper (FAS)
LO 1.3. To generate and analyze managerial and tax reports of companies and correctly interpret the information obtained for making organizational decisions	Interactive lectures with presentations, discussion-based learning, case-based learning, project-based learning (term paper), work with databases using Excel spreadsheet	Written individual assignments on data analysis (CAS), assessment of the meaningful contribution to in-class discussions (CAS), defense of the term paper (FAS)
LO 1.4. To demonstrate the ability for analysis, identification and assessment of risks.	Interactive lectures with presentations, discussion-based learning, case-based learning	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), final exam (FAS)

ASSESSMENT AND GRADING

Ranges of points corresponding to grades	core (points) for all types of learning activities	ECTS grading scale	The national grading scale	Allocation of grade points
	90-100	A	excellent	
	82-89	B	good	
	74-81	C		
	64-73	D	satisfactory	
	60-63	E		
	35-59	FX	Unsatisfactory (with the exam retake option)	
	0-34	F	Unsatisfactory (with mandatory repetition of the course)	

100% Final grade is the result of the Final assessment (50%) and Continuous assessment (50%).
50% Final assessment: the final exam (25 %); the defense of the term paper (25 %)
50% Continuous assessment:

- 20% individual and group written assignments;
- 20% mid-term control (an open-question test);
- 10% participation in class discussions

Course policy

Students are expected to attend classes regularly, to get to class on time and stay for the duration of the class. In the case of absence, students will be required to submit all assignments to make up for the missed classes. Students are also expected to come to class having read all the required material and being ready to productively participate in the class discussions. Written assignments should be submitted before the specified deadlines.

COURSE STRUCTURE AND CONTENT

Lecture	Content	Practical	Content	Self-study
Lecture 1	Introduction to decision making	Practical 1	The role of decision making in management	Watching a video on effective decision making and writing an essay on the main takeaways. Describing one's own important life decision (either past or pending), classifying it and analyzing decision environment. Decomposing a complex decision into a number (hierarchy) of sub-decisions Comparing rational decision making model and bounded rationality model; providing examples of cognitive distortions and their effect on decision making in organizations; preparing for discussing the political model of decision making and sources of power in organizations; showing the role of a systems approach in decision making. Case study on ethical decision making. Applying the Fishbone diagram for root cause analysis (collaborative project); case study on decision making: suggesting an appropriate decision making method for a given decision situation; choosing an appropriate leadership style for a given decision situation using the Vroom-Yetton-Jago model. Solving problems using Analytic Hierarchy Process; making choice using non-compensatory models. Working on the term paper.
Lecture 2	Methodological approaches to decision making. Decision-making models	Practical 2	Normative, descriptive and integrative approaches to decision making. Deviations from the rational decision making model. Ethical decision making	
Lecture 3	Individual and group decision making	Practical 3	Advantages and disadvantages of individual and group decision making.	
Lecture 4	Multiple criteria decision making	Practical 4	The use of compensatory and non-compensatory	

			models in decision making. Analytic hierarchy process.	
Lecture 5	Decision making under certainty	Practical 5	The use of decision tables and linear programming	Solving problems on resource allocation with the help of linear programming using a graphical method and MS Excel spreadsheets.
Lecture 6	Decision making under uncertainty	Practical 6	Practicing the use of different criteria for decision making under uncertainty.	Solving problems on decision making under uncertainty using different criteria.
Lecture 7-8	Decision making under risk conditions	Practical 7-8	Practicing the use of payoff matrices and decision trees. Types of risks and risk management systems	Solving problems with the use of payoff matrices and decision trees. Solving problems using the concept of expected utility. Case study on risk identification and management.
Lecture 9	The value of information	Practical 9	Computing the value of perfect and imperfect information.	Solving problems: computing the value of perfect information; computing the revised probabilities using Bayes' theorem; making a decision on whether to acquire imperfect information.
Lecture 10	Optimization models	Practical 10	Inventory control models; queueing theory; game theory	Solving problems using inventory control models; queuing theory model; finding solutions to games with mixed strategies.
Lecture 11	Decision support systems	Practical 11	Components of decision support systems; types of decision support systems	Analyzing a given set of data using MS Excel spreadsheet and writing recommendations for decision makers.
Lecture 12	Decision implementation	Practical 12	The mechanism for implementing a decision. Evaluating the decision outcomes.	Case study on a change in organizational design and the development of a mechanism of the decision implementation.

RECOMMENDED READING

Required	<ol style="list-style-type: none"> 1. Bonanno G. Decision Making, 2017. http://faculty.econ.ucdavis.edu/faculty/bonanno/PDF/DM_book.pdf 2. Pownall I. Effective Management Decision Making: An Introduction / Ian Pownall & bookboon.com, 2012. - 236 p. 3. Albright C.S., Winston W. L. Data Analysis and Decision Making. 5th Ed. / Cengage Learning, 2015. – 990 p. 4. Turban E., Meredith J. R. Fundamentals of Management Science / McGraw-Hill, 1998. – 914 p. 5. Mu E., Pereyra-Rojas M. Practical Decision Making: An Introduction to the Analytic Hierarchy Process / Springer Briefs in Operations Research. / Springer, 2017. https://link.springer.com/content/pdf/bbm%3A978-3-319-33861-3%2F1.pdf 	Additional	<ol style="list-style-type: none"> 1. Прийняття управлінських рішень : навчальний посібник / [Ю.Є.Петруня, Б. В. Літовченко, Т. О. Пасічник та ін.] ; за ред. Ю.Є. Петруні. – [3- те вид., переробл. і доп.]. – Дніпропетровськ : Університет митної справи та фінансів, 2015. – 209 с. 2. Гевко І.Б. Методи прийняття управлінських рішень: підручник. – К.: Кондор, 2009. – 187 с. 3. Файнзільберг О.А. Теорія прийняття рішень : підручник / Л.С. Файнзільберг, О.А. Жуковська, В.С. Якимчук. – Київ : Освіта України, 2018. – 246 с. 4. Madden J. A Practical Guide For Consensus-Based Decision Making. London, Ontario, 2017. https://www.tamarackcommunity.ca/hubfs/Resources/Tools/Practical%20Guide%20for%20Consensus-Based%20Decision%20Making.pdf 5. Martin M. Top 10 BEST Decision Making Tools for Business in 2021 / August 27, 2021 https://www.guru99.com/decision-making-tools.html 6. Dagher K. 10 of the Most Effective Group Decision Making Techniques June 21,2021 https://fellow.app/blog/productivity/group-decision-making-techniques/
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Academic integrity

Students are expected to adhere to the Code of Ethics of Academic Relations and Integrity of NTU “KhPI”.

The content of this syllabus is consistent with the Managerial Decisions course program.