

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	Business 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 introduces students to decision theory: models and approaches to decision making as well as mathematical tools that can be applied in the process of evaluation and selection of decision alternatives. The overarching goal of the course is to equip students with knowledge and practical skills related to making and implementation of managerial decisions at different levels of organizational hierarchy with a view to achieving organizational goals.
Course objectives	<ul style="list-style-type: none"> • to help students develop the ability to assess a decision situation and choose appropriate approaches to making and implementing decisions; • to familiarize students with qualitative and quantitative decision making tools; • 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, paper. The course ends with a final test.
Term	6

Student workload (credits) / Type of course	5/ Elective	Lectures (hours)	24	Practical classes (hours)	12	Self-study (hours)	114
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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. SC08. The ability to plan an organization's activities and manage time. SC09. The ability to generate business ideas, justify their feasibility and forms of their implementation, present them to the stakeholders
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SC10. The ability to work in a team and establish interpersonal interaction when solving professional tasks.
 SC12. The ability to analyze and structure organizational problems, make informed and justified decisions
 SC16. The ability to assess how work is performed, ensure work quality and motivate the organization's personnel.
 SC2.4. The ability to formulate the main tasks related to the implementation of the risk management system and insurance in business

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)
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, a paper (report) on a topic either not covered or partially covered in the course	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), defense of the paper (CAS), mid-term control (CAS), final test (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 test (FAS)
LO 09. To plan and organize operational activities, to effectively manage the resources of a business entity	Interactive lectures with presentations, discussion-based learning, case-based learning, problem solving using Excel spreadsheet	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), mid-term control (CAS), final test (FAS)
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 test (FAS)
LO16. To demonstrate the ability for independent work, flexible thinking, openness to new knowledge, criticism and self-criticism	A paper (report) on a topic either not covered or partially covered in the course, case-based learning, discussion-based learning, student-peer feedback	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS), presentation of the paper (CAS)
LO1.1. To possess the ability to justify the selection of effective tools for motivating organizational personnel.	Interactive lectures with presentations, discussion-based learning, case-based learning	Written individual assignments (CAS), assessment of the meaningful contribution to in-class discussions (CAS)

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	100% Final grade is the result of the Final assessment (25%) and Continuous assessment (75%). 25% Final assessment: Final test 75% Continuous assessment: <ul style="list-style-type: none">• 35% individual written assignments;• 10% paper• 15% mid-term control (an open- question test);• 15% participation in class discussions
	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)		

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 1	Introduction to decision making	Practical 1	The role of decision making in management Normative, descriptive and integrative approaches to decision making. Deviations from the rational decision making model. Ethical decision making	Self-study	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.
Lecture 2	Methodological approaches to decision making. Decision-making models				
Lecture 3	Individual and group decision making	Practical 2	Advantages and disadvantages of individual and group decision making. The use of compensatory and non-compensatory models in decision making. Analytic hierarchy process.		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 paper (report) and its presentaion.
Lecture 4	Multiple criteria decision making				
Lecture 5	Decision making under certainty	Practical 3	The use of decision tables and linear programming Practicing the use of different criteria for decision making under uncertainty.		Solving problems on resource allocation with the help of linear programming using a graphical method and MS Excel spreadsheets. Solving problems on decision making under uncertainty using different criteria.
Lecture 6	Decision making under uncertainty				
Lecture 7	Decision making under risk conditions	Practical 4	Practicing the use of payoff matrices and decision trees. Types of risks and risk management systems Computing the value of perfect and imperfect information.		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. 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 8	The value of information				
Lecture 9-10	Optimization models	Practical 5	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 6	Components of decision support systems; types of decision support systems The mechanism for implementing a decision. Evaluating the decision outcomes.	Analyzing a given set of data using MS Excel spreadsheet and writing recommendations for decision makers. Case study on a change in organizational design and the development of a mechanism of the decision implementation.
Lecture 12	Decision implementation.			

RECOMMENDED READING

Required	<p>1. Bonanno G. Decision Making, 2017. http://faculty.econ.ucdavis.edu/faculty/bonanno/PDF/DM_book.pdf</p> <p>2. Pownall I. Effective Management Decision Making: An Introduction / Ian Pownall & bookboon.com, 2012. - 236 p.</p> <p>3. Albright C.S., Winston W. L. Data Analysis and Decision Making. 5th Ed. / Cengage Learning, 2015. – 990 p.</p> <p>4. Turban E., Meredith J. R. Fundamentals of Management Science / McGraw-Hill, 1998. – 914 p.</p> <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</p>	Additional	<p>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.</p> <p>2. Гевко І.Б. Методи прийняття управлінських рішень: підручник. – К.: Кондор, 2009. – 187 с.</p> <p>3. Файнзільберг О.А. Теорія прийняття рішень : підручник / Л.С. Файнзільберг, О.А. Жуковська, В.С. Якимчук. – Київ : Освіта України, 2018. – 246 с.</p> <p>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</p> <p>5. Martin M. Top 10 BEST Decision Making Tools for Business in 2021 / August 27, 2021 https://www.guru99.com/decision-making-tools.html</p> <p>6. Dagher K. 10 of the Most Effective Group Decision Making Techniques June 21,2021 https://fellow.app/blog/productivity/group-decision-making-techniques/</p>
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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.