

**FEDERAL STATE BUDGET EDUCATIONAL
INSTITUTION OF HIGHER EDUCATION
“LOMONOSOV MOSCOW STATE UNIVERSITY”**

FACULTY OF ECONOMICS

«APPROVED»

Dean of the Faculty of Economics, MSU

professor _____ A.A.Auzan

«__» _____ 2021

COURSE SYLLABUS

Course title:

MODERN TECHNOLOGIES AND METHODS OR MANAGERIAL DECISION-MAKING

Level of higher education:

MASTER STUDIES

Field of study:

38.04.02. MANAGEMENT

Mode of study:

FULL-TIME

Course syllabus is considered and approved by
the Educational and Methodological Council of the Faculty of Economics
(minutes № _____, date)

Moscow 2021

The course syllabus is developed in accordance with the self-established MSU educational standard (ES MSU) for implemented main professional educational programs of higher education for Master's degree in the field of study 38.04.02. Management

ES MSU is approved by the decision of MSU Academic Council dated December 28, 2020, minutes №7

Year (years) of enrollment: 2021 and forthcoming

1. Place and status of the course in the structure of the Master program

Course status: *obligatory*

Trimester: 1

2. Course Prerequisites

This discipline is based on the knowledge and skills acquired as a result of studying following courses:

— Module 3 (General Part) ‘Management of the Organization’, Admission Exam Programme «International Business Management»

— Module 1 (Special Part) ‘International aspect of the external environment of the organization’, Admission Exam Programme «International Business Management».

3. Intended learning outcomes (ILO) of the course associated to the required competencies of the graduates

Competencies of graduates (codes)	Indicators of achievement of competencies	Intended learning outcomes of the course (module) associated to the required competencies of the graduates
UC-1. Capable of carrying out a critical analysis of problematic situations based on a systematic approach, developing a strategy of actions, formulating scientifically based hypotheses, applying the methodology of scientific knowledge in professional activity	UC-1.I-1. Analyzes the problem situation as an integral system, identifying its components and the connections between them	UC-1.I-1.K-1. Knows the methodology of setting a goal and determining ways to achieve it
		UC-1.I-1.A-1. Able to determine the essence of the problem situation and the stages of its resolution, taking into account variable contexts
		UC-1.I-1.A-2. Able to collect, systematize and critically analyze the information necessary to develop a strategy for resolving a problematic situation
	UC-1.I-2. Develops solutions to the problem situation based on a critical analysis of available information	UC-1.I-2.A-1. Able to assess the adequacy and reliability of information about a problem situation, to work with contradictory information from different sources
		UC-1.I-2.A-2. Able to find a solution to a problem situation based on actions, experiment and

		experience
		UC-1.I-2.A-3. Able to identify possible solutions to a problem situation based on the analysis of cause-and-effect relationships
	UC-1.I-3. Develops a strategy of actions to solve a problem situation in the form of a sequence of steps, anticipating the result of each of them	UC-1.I-3.A-1. Able to implement and argue the choice of a strategy to solve a problem situation, understanding the advantages and disadvantages of the chosen strategy
		UC-1.I-3.A-2. Able to develop an action plan to solve a problem situation, identifying and evaluating the practical consequences of implementing actions to resolve a problem situation
GPC-2. Capable of applying modern techniques and methods of data collection, advanced methods of their processing and analysis, including the use of intelligent information and analytical systems, in solving management and research tasks	GPC-2.I-1. Effectively uses modern techniques and methods of data collection, advanced methods of their processing and analysis	GPC-2.I-1.A-1. Knows the main sources and methods of searching and collecting information
		GPC-2.I-1.A-1. Able to competently use advanced data analysis methods in accordance with the assigned research or management task
	GPC-2.I-2. Uses intelligent information and analytical systems in solving management and research tasks	GPC-2.I-2.A-1. Able to use information and analytical systems, find and analyze the necessary information in accordance with the task being solved
GPC-3. Capable of making sound organizational and managerial decisions independently, evaluating their operational and organizational effectiveness and social significance, ensuring their implementation in a complex (including cross-cultural) and dynamic environment	GPC-3.I-1. Evaluates options for solving organizational and managerial tasks based on their operational and organizational effectiveness, as well as social significance.	GPC-3.I-1.K-1. Knows the basic qualitative and quantitative methods for evaluating the effectiveness and social significance of management decisions
		GPC-3.I-1.A-1. Able to evaluate the results of organizational and managerial decisions in terms of their social significance, as well as operational and organizational effectiveness
	GPC-3.I-2. Makes organizational and managerial decisions in a complex (including cross-cultural) and dynamic environment	GPC-3.I-2.K-1. Knows basic methods and technologies for making organizational and managerial decisions
		GPC-3.I-2.A-1. Able to apply modern approaches,

		methods and technologies for managerial decision-making
PC-7. Capable of assessing the information needs of an organization, preparing analytical materials for the examination of management processes	PC-7.I-1. Conducts an analysis of the information needs of an organization	PC-7.I-1.K-1. Knows the goals and objectives of information management, causes of information needs, methods for studying information needs
		PC-7.I-1.A-1. Able to analyze information needs and determine requests for information and analytical support of an organization
		PC-7.I-2.A-2. Able to prepare materials that reveal the information needs of an organization for the examination of management processes
PC-8. Capable of conducting examination of management processes, preparing an expert opinion with provision of recommendations	PC-8.I-1. Conducts examination of management processes	PC-8.I-1.K-1. Knows the methods and principles of conducting examination of management processes
		PC-8.I-2.A-1. Able to evaluate the effectiveness of the organization's management processes
	PC-8.I-2. Presents the results of examination of the organization's management processes with provision of recommendations	PC-8.I-2.K-1. Knows current forms of presenting the results of examination of management processes
		PC-8.I-2.A-1. Able to develop recommendations for improving the efficiency of management processes based on the analysis conducted

4. Workload of the course by types of activity

The workload of the discipline is 3 ECTS: 108 academic hours, including 52 academic hours of contact work with a professor, 56 academic hours of self-directed studies.

5. **Learning format:** full-time, with the use of educational platform On.Econ and distant learning technologies (Zoom)

6. **Content of the course structured by topics (sections) indicating the number of academic hours allocated to them and types of training**

Title and brief content of sections and topics of the course (module), Form of assessment for the course (module)	Total (hours)	Including							
		Contact work (work in contact with a professor) <i>Types of contact work, hours</i>				Student self-directed studies <i>Types of self-directed studies, hours</i>			
		Seminars	Group consultations	Individual consultations	Total	Reflection forms	Interim group project	Exam – test and case study in groups	Total
Topic 1. Intro into management decisions. Basic principles.	16	4	-	4	8	1	4	3	8
Topic 2. Problem structuring for better decision making	16	4	-	4	8	1	4	3	8
Topic 3. Decision making in uncertainty	16	4	-	4	8	1	4	3	8
Topic 4. Human factor in decision making: cognitive biases	16	4	-	4	8	1	4	3	8
Topic 5. Human factor in decision making: group dynamics	16	4	-	4	8	1	4	3	8
Topic 6. Digital in decision making	16	4	-	4	8	1	4	3	8
Midterm assessment: exam – test and case study in groups	12	4	-	-	4	-	-	8	8
Total	108	28	-	24	52	6	24	26	56

Brief content of the course topics

Topic 1. Intro into management decisions. Basic principles.

What decisions are considered “management decisions”. Why this is relevant to everyone and not just top managers. What decision sciences are about. Case study in small teams to highlight the difficulty of making strategic decisions in real life, when not all information is available, and consequences are hard to predict. Good decisions vs. bad decisions. Course program overview. Signing up for group projects.

Topic 2. Problem structuring for better decision making.

Strategy consulting toolkit in decision making. Art of asking open questions. How to reformulate a problem into something potentially solvable. SMART principles. Problem statement (problem description template). Decision making as a process (decision funnel). Issue trees, hypothesis trees. MECE principle (mutually exclusive, collectively exhaustive). Frameworks – typical ways to structure and solve business problems. Decision / solution communication: pyramid principle, Situation-Complication-Resolution sequence. 1-2 cases in small teams.

Topic 3. Decision making in uncertainty.

Uncertainty index. Uncertainty levels. Uncertainty types by zone of control. Strategies to handle uncertainty. Relevant tools and concepts from risk management (asymmetric risks, tail risks, scenario planning, risk adjusted forecasting etc.). Relevant tools of business / startup development under uncertainty (Lean Startup methodology, hypotheses testing, experiments, iterations, MVP). No regret moves. Potentially: chicken game (game theory), signaling effect, commitment device. Case study in small teams. Group project presentation in “antifragile”.

Topic 4. Human factor in decision making: cognitive biases.

What is behavioral economics. Cognitive biases and how they affect decision quality and consequences. Survivorship bias. Confirmation / desirability bias. Overconfidence bias. Status-quo bias. Normalcy bias. Sunk cost fallacy. Group project on cognitive biases and emotions in investor’s decision making in the stock market. Group project on stereotypes and biases in unintended and self-discrimination. Group project on prospect theory.

Topic 5. Human factor in decision making: group dynamics.

Aspects of decision making in a group. How team structure and dynamics affect decision quality. Potentially: prisoner’s dilemma (game theory). Groupthink. Importance of diversity and difference in opinions. Danger of power distance and culture of fear. Potentially: inclusive vs. extractive institutions. Evolution of organizational decision making in the course of organization’s development. Group project on decision making in teal organizations. Group project on cultural differences in decision making.

Topic 6. Digital in decision making.

How digital affects decision making. What decisions can and cannot be automated. What becomes easier and what becomes more difficult in decision making. How decision making priorities and rules of the game change because of digital. Panel interviews over zoom with various industry practitioners specializing in digital. Group project on decision support systems. Group project on digitalization. Group project on AI and machine learning.

7. Assessment tools to assess the course learning outcomes

7.1. Sample assessment tools:

Learning outcomes of the course	Types of assessment tools
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<p>UC-1.I-1.K-1. Knows the methodology of setting a goal and determining ways to achieve it</p>	<ul style="list-style-type: none"> • Participation in discussions • Reflection forms after every class • Interim group project • Exam – test and case study in groups
<p>UC-1.I-1.A-1. Able to determine the essence of the problem situation and the stages of its resolution, taking into account variable contexts</p>	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
<p>UC-1.I-1.A-2. Able to collect, systematize and critically analyze the information necessary to develop a strategy for resolving a problematic situation</p>	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
<p>UC-1.I-2.A-1. Able to assess the adequacy and reliability of information about a problem situation, to work with contradictory information from different sources</p>	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
<p>UK-1.I-2.A-2. Able to find a solution to a problem situation based on actions, experiment and experience</p>	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
<p>UC-1.I-2.A-3. Able to identify possible solutions to a problem situation based on the analysis of cause-and-effect relationships</p>	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
<p>UC-1.I-3.A-1. Able to implement and argue the choice of a strategy to solve a problem situation, understanding the advantages and disadvantages of the chosen strategy</p>	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
<p>UC-1.I-3.A-2. Able to develop an action plan to solve a problem situation, identifying and evaluating the practical consequences of implementing actions to resolve a problem situation</p>	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
<p>GPC-2.I-1.A-1. Knows the main sources and methods of searching and collecting information</p>	<ul style="list-style-type: none"> • Participation in discussions • Reflection forms after every class • Interim group project • Exam – test and case study in groups
<p>GPC-2.I-1.A-1. Able to competently use advanced data analysis methods in accordance with the assigned research or management task</p>	<ul style="list-style-type: none"> • Participation in discussions • Interim group project

	<ul style="list-style-type: none"> • Exam – test and case study in groups
GPC-2.I-2.A-1. Able to use information and analytical systems, find and analyze the necessary information in accordance with the task being solved	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
GPC-3.I-1.K-1. Knows the basic qualitative and quantitative methods for evaluating the effectiveness and social significance of management decisions	<ul style="list-style-type: none"> • Participation in discussions • Reflection forms after every class • Interim group project • Exam – test and case study in groups
GPC-3.I-1.A-1. Able to evaluate the results of organizational and managerial decisions in terms of their social significance, as well as operational and organizational effectiveness	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
GPC-3.I-2.K-1. Knows basic methods and technologies for making organizational and managerial decisions	<ul style="list-style-type: none"> • Participation in discussions • Reflection forms after every class • Interim group project • Exam – test and case study in groups
GPC-3.I-2.A-1. Able to apply modern approaches, methods and technologies for managerial decision-making	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
PC-7.I-1.K-1. Knows the goals and objectives of information management, causes of information needs, methods for studying information needs	<ul style="list-style-type: none"> • Participation in discussions • Reflection forms after every class • Interim group project • Exam – test and case study in groups
PC-7.I-1.A-1. Able to analyze information needs and determine requests for information and analytical support of an organization	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
PC-7.I-2.A-2. Able to prepare materials that reveal the information needs of an organization for the examination of management processes	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
PC-8.I-1.K-1. Knows the methods and principles of conducting examination of management processes	<ul style="list-style-type: none"> • Participation in discussions • Reflection forms after every class • Interim group project

	<ul style="list-style-type: none"> • Exam – test and case study in groups
PC-8.I-2.A-1. Able to evaluate the effectiveness of the organization’s management processes	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups
PC-8.I-2.K-1. Knows current forms of presenting the results of examination of management processes	<ul style="list-style-type: none"> • Participation in discussions • Reflection forms after every class • Interim group project • Exam – test and case study in groups
PC-8.I-2.A-1. Able to develop recommendations for improving the efficiency of management processes based on the analysis conducted	<ul style="list-style-type: none"> • Participation in discussions • Interim group project • Exam – test and case study in groups

7.2. Course assessment criteria (scores):

Types of assessment tools	Score
1. Participation in discussions	40
2. Reflection forms after every class	40
3. Interim group project	40
4. Exam – test and case study in groups	30
Total	150

7.3. Grade for the course is determined based on the following criteria:

Grade	Minimum score	Maximum score
<i>Excellent</i>	127,5	150,0
<i>Good</i>	97,5	127,0
<i>Satisfactory</i>	60,0	97,0
<i>Failed</i>	0,0	59,5

Note: in case a student’s score obtained during the trimester is less than 20% of the maximum score of the discipline, the following rule of passing the course should be applied at the midterm assessment (and further re-examination): ‘a student can obtain only a satisfactory mark and only in case she/he receives for the midterm assessment, including all the course

material, no less than 85% of the score allocated to this assessment’.

7.4. Typical tasks and other materials necessary to assess the learning outcomes:

— *Participation in discussions – analysis of case studies in small groups*

Examples of tasks (generalized): “Company A is facing an issue, formulate what important decisions the CEO will have to make” or “Company B wants to increase profits, suggest what it should do”, etc.

— *Reflection forms after every class*

Sample questions in a reflection form:

- What is your main learning from this class? E.g. a new concept, or an interesting case example, or a new approach you may try - something you found especially relevant.
- What have you especially liked about this class? E.g. a particular exercise, or a quality of discussion, or anything that made your experience better.
- Which of the class concepts would you be willing to try out in your everyday life and for what kind of decisions?

— *Interim group project*

Sample project: business decision under uncertainty

- Form a team of 5-6 people by class 2
- Choose: (1) a company from your home market you are curious about and (2) a turning moment in their history
- The company should be relatively large and well known, either already public or with IPO potential
- Analyze decisions the company took at that important period in time that either lead to prosperity or to decline
- Prepare a short PowerPoint presentation (5-8 slides)
- Present for 10-15 minutes at class 6
- Try to be insightful, entertaining and evidence based

— *Exam – test and case study in groups*

Sample test question:

We often overlook the “silent evidence” of history’s losers. This is a description of):

- a) Confirmation bias
- b) Survivorship bias
- c) Overconfidence bias
- d) Normalcy bias

Sample case study: coffee shop

- Your friend wants to increase profits from his coffee shop and is asking you for advice
 - The coffee shop has been working for a year, quite successfully, but your friend wants more money
 - Your friend doesn't want to change location, sell franchise and open new branches
 - Your friend already tried to advertise on social media, however it didn't work well for him
 - Offer your friend a structured program of required improvements (not just a laundry list of ideas)
- Submit a picture of your issue tree (in a photo or a presentation file). One submission per person (may or may not be similar to group).

7.5. Methodological guidelines and assignment requirements:

— *Preparation and presentation of interim group projects*

Students will be offered a list of topics to study and prepare short presentations (mainly from the subtopics of the Topic 4). During group presentations, you will need to briefly talk about the concept and its possible practical application in management decisions. Evaluation criteria: (1) relevance to the topic, (2) absence of violations of academic ethics, (3) creativity.

— *Participation in discussions – analysis of case studies in small groups*

During a class, students are divided into groups and develop their solution to the proposed problem/task.

Evaluation criteria: (1) compliance with the topic, (2) absence of violations of academic ethics, (3) completeness of answers to the questions asked, (4) use of completed models and concepts, (5) validity of the solution.

— *Reflection forms after every class*

After every class, students are asked to fill out an electronic form with several questions to reflect on. For example, what they learned from studying a certain topic in class, how they see its possible application in practice, what additional questions they had during the discussion of the topic, etc. The goals of this exercise are: 1) to motivate students to practically apply the material covered, 2) to collect feedback after the lesson. Evaluation criteria: (1) compliance with the topic, (2) absence of violations of academic ethics, (3) completeness of answers to the questions asked.

— Exam – test and case study in groups

Exam consists of two parts:

Part 1: online test (open book, students are welcome to bring their smartphones or laptops for convenience)

Part 2: case study (team discussion + individual answers)

Students will be asked to analyze a business case in small groups and then present it. The case will be a business problem that a student needs to examine and propose a solution to (with arguments). The presentation will need to incorporate structures and concepts from the course syllabus.

Evaluation criteria: (1) compliance with the topic, (2) absence of violations of academic ethics, (3) completeness of answers to the questions asked, (4) use of completed models and concepts, (5) validity of the solution.

8. Resources

8.1. List of main and additional literature

Main literature:

1. Course materials.
2. Marc P. Cosentino. Case in Point: Complete Case Interview Preparation, 11th Edition. Burgee Press, 2020. URL: <https://www.wallstreeoasis.com/files/case-in-point-7th-edition1.pdf> (7th edition)
3. Ethan M. Rasiel. The McKinsey Way: Using the Techniques of the World's Top Strategic Consultants to Help You and Your Business. McGraw-Hill, 1999. URL: http://csinvesting.org/wp-content/uploads/2012/07/the_mckinsey_way.pdf
4. Eric Ries. The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. Currency, 2011. URL: https://www.academia.edu/6418358/The_Lean_Startup_How_Today_s_Entrepreneurs_Use_Continuous_Innovation_to_Create_Radically_Successful_Businesses
5. Stephen M. Byars, Kurt Stanberry. Business Ethics. OpenStax, 2018. URL: <https://assets.openstax.org/oscms-prodcms/media/documents/BusinessEthics-OP.pdf>
6. Frederic Laloux. Reinventing Organizations: A Guide to Creating Organizations Inspired by the Next Stage of Human Consciousness. Nelson Parker, 2014. URL: <https://www.socialskills4you.com/wp-content/Reinventingorganization.pdf>
7. Marco Iansiti, Karim R. Lakhani. Competing in the Age of AI: Strategy and Leadership When Algorithms and Networks Run the World. Harvard Business Review Press, 2020. URL: <https://hbr.org/2020/01/competing-in-the-age-of-ai>

Additional literature:

1. Victor Cheng. Case Interview Secrets: A Former McKinsey Interviewer Reveals How to Get Multiple Job Offers in Consulting. Innovation Press, 2012.
2. Barbara Minto. The Pyramid Principle: Logic in Writing and Thinking. Prentice Hall, 3rd edition, 2010.
3. Nassim Taleb. The Black Swan: The Impact of the Highly Improbable. Penguin, 2008.
4. Nassim Taleb. Antifragile: How to Live in a World We Don't Understand. Penguin, 2012.
5. Jim Collins, Morten T. Hansen. Great by Choice: Uncertainty, Chaos and Luck – Why Some Thrive Despite Them All. Harper Business, 2011.
6. Jim Collins. Good to Great: Why Some Companies Make the Leap and Others Don't. Harper Business, 2001.
7. Haim Shapira, PhD. Gladiators, Pirates and Games of Trust: How Game Theory, Strategy and Probability Rule our Lives. Watkins Publishing, 2017.
8. Malcolm Gladwell. The Tipping Point: How Little Things Can Make a Big Difference. Little, Brown and Company, 2006.
9. Simon Sinek. The Infinite Game: How Great Businesses Achieve Long-Lasting Success. Penguin, 2019.
10. Dan Ariely. Predictably Irrational: The Hidden Forces That Shape Our Decisions. Harper Perennial, revised and expanded edition, 2010.
11. Daniel Kahneman. Thinking, Fast and Slow. Farrar, Straus and Giroux, 2011.
12. Richard H. Thaler, Cass R. Sunstein. Nudge. The Final Edition. Penguin Books, 2021.
13. Dave Logan, John King, Halee Fischer-Wright. Tribal Leadership: Leveraging Natural Groups to Build a Thriving Organization. Harper Business, 2011.
14. Don Edward Beck, Christopher C. Cowan. Spiral Dynamics: Mastering Values, Leadership, and Change. Blackwell, 2005.
15. Daron Acemoglu, James A. Robinson. Why Nations Fail: The Origins of Power, Prosperity, and Poverty. Profile Books, 2013.
16. Yuval Noah Harari. 21 Lessons for the 21st Century. Random House, 2018.
17. Thomas M. Siebel. Digital Transformation: Survive and Thrive in an Era of Mass Extinction. RosettaBooks, 2019.
18. Tony Saldanha. Why Digital Transformations Fail: The Surprising Disciplines of How to Take Off and Stay Ahead. Berrett-Koehler Publishers, 2019.
19. Artificial Intelligence: The Insights You Need from Harvard Business Review (HBR Insights). Harvard Business Review Press, 2019.

8.2. List of licensed software

Package of Software 'Microsoft Office'.

8.3. List of professional databases and information referral systems

Institutional subscription resources of the Faculty of Economics, MSU.

8.4. List of Internet resources (if necessary)

— <http://hbr.org/>

— <http://www.mckinsey.com/russianquarterly>

— www.aom.org

8.5. Description of material and technical support

For the appropriate organization of classes, the following equipment is needed:

- ‘ON.ECON’ electronic educational information environment of the Faculty of Economics, Lomonosov Moscow State University
- multimedia class with a video projector, Internet access
- Institutional subscription resources of the Faculty of Economics, MSU.

9. Language of instruction: *English*

10. Professor: *Tatiana Selskaya*

11. Syllabus author: *Tatiana Selskaya*