

APPROVED:  
Vice-rector for study and methodical work  
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*Аналитические методы принятия управленческих решений /  
Business Analytics for Decision Making*

**Syllabus of the course**

Specialty	38.04.02 Management
Specialization	Business Analytics for Decision Making (International Business Administration)
Level of higher education	Masters Degree
Form of training	Full-time
Year of enrolment	2022

Authored by:

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Total number of hours	108	<b>Form of final attestation:</b>  Exam: semester 2
incl:		
contact work	32	
self-study	40	
practical training	0	
control hours	36	

**Hours distribution:**

Semester:	2
Type of classes	Hours
Contact hours	18
Practical training	14
Laboratory work	
<b>Total contact hours</b>	<b>32</b>
Self-study	40
Control hours	36
<b>Total academic hours</b>	<b>108</b>
<b>Total credits</b>	<b>3</b>

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## 1. LEARNING OBJECTIVES

<b>Objective:</b>	Formation of theoretical knowledge about mathematical, statistical and quantitative methods of development, adoption and implementation of management decisions and practical skills to find management decisions and be able to evaluate their effectiveness.
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## 2. COURSE PLACE IN THE PROGRAMME STRUCTURE

Discipline B1.O Business Analytics for Decision Making refers to the part formed by the participants of the educational relations of Block 1.

## 3. EXPECTED LEARNING OUTCOMES

Code and name of graduate competence	Code and name of the competence achievement indicator	Expected learning outcomes
GPC-2 – Is able to apply 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-2.2 – Develops and implements research and analytical projects for information support of management decision-making	<p>To know: modern techniques and methods of data collection, methods of their analysis, information and analytical systems.</p> <p>To be able to: apply appropriate techniques and techniques in data collection, process data using intelligent information and analytical systems.</p> <p>To possess: development of research and analytical projects for information support of managerial decision-making.</p>
GPC-5 – Able to generalize and critically evaluate scientific research in management and related fields, to carry out research projects	GPC-5.2 – Critically evaluates the results of scientific research, analyzes, summarizes, systematizes and evaluates the results of scientific research in the field of management and related fields, develops and implements research, analytical, consulting and	<p>To know: ways and methods of analysis and evaluation of research projects, methods of development of scientific research in the field of management and related fields.</p> <p>To be able to: critically evaluate and summarize the results of scientific research in management and related fields.</p> <p>To possess: development and implementation of research, analytical and consulting projects.</p>

	other similar projects	
PC-1 – Able to analyze and predict the development of the organization, develop measures to improve its business model and international strategy	PC-1.1 – Analyzes the external environment of international markets, analyzes and develops business models for international markets, uses analytical methods to support management decision-making	<p>To know: methods of analyzing the external environment of international markets, methods of developing a business model and an international strategy.</p> <p>To be able to: analyze the external environment of international markets, analyze business models for international markets.</p> <p>To possess: forecasting the development of an organization and developing a business model for international markets using analytical methods.</p>
UC-1 – Able to carry out a critical analysis of problematic situations based on a systematic approach, to develop a strategy of actions	UC-1.2 – Finds and critically analyzes the information necessary to solve the task, compares different sources of information in order to identify their contradictions and search for reliable judgments	<p>To know: methods of critical analysis of information and data, principles of a systematic approach to analysis</p> <p>To be able to: find and analyze information and data according to the problem being solved.</p> <p>To possess: strategy development based on reliable judgments and critical system analysis of information.</p>

#### 4. COURSE STRUCTURE AND CONTENT

Code and name of the topics	Course content	Academic hours			
		Contact work			Self-study
		Lectures	Practices	Workshops	
Section I. Fundamentals of managerial decision-making.					
Topic 1. The concept and typology of business models	The concept of an organization's business model. Classification of business models. Typology of business models in international markets.	2			2
Topic 2. The process of developing and improving business models based on managerial decision-making	The process of developing a business model. The role of management decisions in improving the business model. Types of management decisions and strategies.	2			4

<b>Section II. Analytical methods for diagnosing problems</b>					
Topic 3. Methods of information and data collection	Methods of obtaining data and information about the internal and external environment of the organization. Features of these international markets. Data and information services.	2	2		4
Topic 4. Methods of diagnostics of external and internal environment of organizations	Diagnosis of an external critical situation. Diagnostics of the internal environment of the organization. Methods and software.	2	2		4
<b>Section III. Analytical methods for identifying strategic alternatives</b>					
Topic 5. Brainstorming methods	Brainstorming methods, heuristic methods, Delphi method. Classification and application features.	2	2		4
Topic 6. Methods of related alternative solutions	Morphological analysis, decision tree method, script method, hierarchical method, synectics method. Conditions and characteristics of methods.	2	2		4
<b>Section IV. Analytical methods for evaluating alternatives to management decisions</b>					
Topic 7. Expert methods for evaluating strategies	Classification of expert methods. Conditions and limitations of use. Characteristics of the methods.	2	2		6
Topic 8. Criteria-based methods for evaluating strategies	Single-criteria methods: linear programming, optimization method. Multi-criteria methods. Assessment methods in conditions of probability, risk and uncertainty. Conditions and characteristics.	2	2		6
<b>Section V. Analytical methods of organization and evaluation of the effectiveness of management decisions</b>					
Topic 9. Methods of planning, organization and evaluation of strategic decisions for the business model	Methods of planning strategic management decisions. Methods of organizing strategies. Methods of evaluating the effectiveness of management decisions. Forecast of strategic decisions.	2	2		6
<b>Control hours:</b>					<b>36</b>
<b>Total hours:</b>		<b>18</b>	<b>14</b>	<b>0</b>	<b>40</b>

## 5. TEACHING AND LEARNING TOOLS OF THE COURSE

### 5.1 Recommended literature

Bibliographic description of the publication (author, title, type, place and year of publication, number of pages)	Digital resources
Nikiforova, Natalia Alexandrovna. Managerial analysis : textbook for universities / N. A. Nikiforova, V. N. Tafintseva. 3rd ed., corr. and add. Moscow : Yurayt, 2022. 413 p.	<a href="https://urait.ru/viewer/upravlencheskiy-analiz-488850">https://urait.ru/viewer/upravlencheskiy-analiz-488850</a>
Rychkova N.V. Marketing research : Textbook / Rychkova N.V. Moscow : KnoRus, 2021. 310 p.	<a href="https://book.ru/book/938760">https://book.ru/book/938760</a>

### 5.2 List of software (including national production)

- 7-Zip
- Microsoft Office Professional
- Microsoft Windows Professional
- Firewall

### 5.3 List of reference systems and modern professional databases

№	Name of reference systems and professional databases
1.	Digital library Grebennikon.ru – <a href="http://www.grebennikon.ru">www.grebennikon.ru</a>
2.	Science Digital Library eLIBRARY – <a href="http://www.elibrary.ru">www.elibrary.ru</a>
3.	Science Digital Library КиберЛеника – <a href="http://www.cyberleninka.ru">www.cyberleninka.ru</a>
4.	Database ПОЛПРЕД Справочники – <a href="http://www.polpred.com">www.polpred.com</a>
5.	Database OECD Books, Papers & Statistics on the platform OECD iLibrary <a href="http://www.oecd-ilibrary.org">www.oecd-ilibrary.org</a>
6.	Legal reference system КонсультантПлюс (installed resource UNECON or <a href="http://www.consultant.ru">www.consultant.ru</a> )
7.	Legal reference system «ГАРАНТ» (installed resource UNECON or <a href="http://www.garant.ru">www.garant.ru</a> )
8.	Information and referral system «Кодекс» (installed resource UNECON or <a href="http://www.kodeks.ru">www.kodeks.ru</a> )
9.	Digital library system BOOK.ru - <a href="http://www.book.ru">www.book.ru</a>
10.	Digital library system ЭБС ЮРАЙТ – <a href="http://www.urait.ru">www.urait.ru</a>
11.	Digital library system ЗНАНИУМ (ZNANIUM) – <a href="http://www.znanium.com">www.znanium.com</a>
12.	Digital library UNECON – <a href="http://opac.unecon.ru">opac.unecon.ru</a>

## 6. TECHNICAL FACILITIES

There are special rooms for lectures, seminars, coursework, group and individual consultations, current and interim assessments, as well as rooms for self-study.

The premises are equipped with equipment and teaching aids.

The rooms for students' independent work are equipped with computers with Internet connection and access to the university's electronic learning environment.

<b>Name of classroom</b>	<b>Classroom location</b>
Classroom 1043 Training classroom (for lecture- and seminar-type classes, coursework, group and individual consultations, current control and intermediate attestation), equipped with a multimedia system. Specialised furniture and equipment: Educational furniture for 42 seats (21 desks), teacher's workplace, chalk board 1 pc. (3 sections), chair 1 pc., table 2 pcs., iso chair 2 pcs.. Portable multimedia kit: Laptop HP 250 G6 1WY58EA, Multimedia projector LG PF1500G. Sets of display equipment and visual aids: multimedia applications for lecture courses and practical sessions, interactive teaching and visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P
Classroom 1064 Training classroom (for lecture- and seminar-type classes, coursework, group and individual consultations, current control and intermediate attestation), equipped with a multimedia system. Special furniture and equipment: Educational furniture for 42 seats, a teacher's workplace, a whiteboard - 1 pc, a table - 1 pc, a chair - 1 pc, an interactive projector Epson-EB-455Wi - 1 pc, a computer Intel i3-2100 2.4 Ghz/4Gb/500Gb/Acer V193 19" - 1 pc. Sets of display equipment and visual aids: multimedia applications for lecture courses and practical sessions, interactive teaching and visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P
Classroom 2007 Training classroom (for lecture- and seminar-type classes, coursework, group and individual consultations, current control and intermediate attestation), equipped with a multimedia system. Specialized furniture and equipment: Training furniture for 126 seats, teacher's workplace, m/m table - 1 pc, desk - 6 pcs, chair - 1 pc, chalk board (3 sectional) - 2 pcs, Chair - 3 pcs., Computer Intel i3-2100 2.4 Ghz/4Gb/500Gb/Acer V193 19" - 1 pc, Multimedia projector Type 2 Panasonic PT-VX610E - 1 pc, ScreenMedia Champion 244x183cm (SCM-4304) - 1 pc. Sets of display equipment and visual aids: multimedia applications for lecture courses and practical sessions, interactive teaching and visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P
Classroom 2009 Training classroom (for lecture- and seminar-type classes, coursework, group and individual consultations, current control and intermediate attestation), equipped with a multimedia system. Special furniture and equipment: Educational furniture for 122 seats (study table 61 pcs., chairs 122 pcs.), the teacher's workplace, desk m/m, drawer 1 pc, chalk board 1 pc (3 sections), chair 1 pc, drawer 1 pc, chair 1 pc, Chair 2 pcs., Intel i3-2100 2.4 Ghz /4Gb/500Gb/Acer V193 19" - 1 pc, Sound projector Yamaha YSP-3000 - 1 pc, Projector stand with camera decks - 1 pc, Projection screen draper - 1 pc, Multimedia projector Type 2 Panasonic PT-VX610E - 1 pc, Screen Media D1 ceiling bracket - 1 pc. Sets of display equipment and visual aids: multimedia applications for lecture courses and practical sessions, interactive teaching and visual aids.	191023, St. Petersburg, Griboedova canal, 30-32, lit. A, B, P

## **7. METHODOLOGICAL GUIDELINES FOR STUDENTS**

The following documents should be made available to the trainee before the start of the course:

- training and methodological documentation;
- local normative acts regulating the main issues of the organisation and implementation of educational activities, including those regulating the procedure for current monitoring and interim assessment of students;
- the schedule of consultations of the teaching staff.

The level and depth of mastering the discipline is determined by the active and systematic work of students in lectures, seminars, independent work, including in terms of identifying the most significant and relevant problems for further study. A special condition for qualitative mastering of the discipline is an effective organisation of work, which allows distributing the academic workload evenly in accordance with the schedule of the educational process.

When preparing for classes, students have the opportunity to attend consultations with the staff of UNECON according to the timetable set out in the schedule of consultations.

The students' in- and out-of-classroom work should aim to form:

- the fundamentals of the learner's world view and scientific understanding;
- basic knowledge relevant to the training area and the declared professional field, forming the target and professional basis for training;
- professional competences oriented towards the needs of the labour market;
- an individual trajectory by mastering a unique set of professional competences that complement the learner's competence model, through a focus on specific professional specialised areas of knowledge defined by labour market representatives;
- meta-skills for learners, such as teamwork and leadership, data analysis, digital skills, project design and implementation, intercultural interaction.

## **8. SPECIFICATIONS FOR TEACHING DISABLED PERSONS**

Students with disabilities, if necessary, are taught on the basis of an adapted work programme using special teaching methods and didactic materials that take into account the particularities of their psychophysical development, individual capacities and health status.

In order for disabled persons and persons with disabilities to master the curriculum, the University shall ensure that:

- for the visually impaired and visually impaired: availability of information on the timetable in accessible places and adapted forms for learners who are blind or visually impaired; presence of an assistant to assist the learner as needed; production of alternative formats of teaching materials (large print or audio files);
- for the hearing-impaired and hearing-impaired: adequate sound reproduction of information;
- for persons with disabilities and persons with mobility impairments: the possibility of unimpeded access for students to classrooms, restrooms and other areas of the department, as well as their stay in these areas.

Learners with disabilities and persons with disabilities are provided with printed and/or electronic educational resources in forms adapted to their disabilities. The education of students with disabilities may be organised with other students or in separate groups or organisations.



## ASSESSMENT RESOURCES

### 1.1 Control tasks and assignments for interim attestation

1. The concept and typology of business models
2. The process of developing business models based on managerial decision-making
3. The process of improving business models based on management decision-making
4. The role of management strategic decisions in improving business models
5. The concept and typology of management decisions
6. Analytical methods of collecting information and data about companies and markets
7. Modern approaches and methods of intelligent data collection
8. Methods of diagnostics of the external environment of organizations in the conditions of international markets
9. Methods of diagnostics of the internal environment of the organization
10. Analytical methods for identifying strategic alternatives
11. Methods of brainstorming. Typology and characteristics
12. Methods of related alternative solutions. Typology and characteristics
13. Analytical methods for evaluating alternatives to management decisions
14. Expert methods for evaluating strategies. Typology and characteristics
15. Single-criteria methods for evaluating strategies. Typology and characteristics
16. Multi-criteria methods for evaluating strategies. Typology and characteristics
17. Methods for evaluating strategies in conditions of probability, risk and uncertainty. Typology and characteristics
18. Methods of planning strategic management decisions for business models.
19. Methods of organization and implementation of strategic management decisions for business models.
20. Methods of control and strategic management decisions for business models.
21. Responsibility for making strategic management decisions. Types of liability and limitations.

### 1.2 Topics for written task

Is not provided by the work programme of the discipline.

### 1.3 Interim checkpoints

Number	Type	Method of conduct	Topic number
1	Case	written	1-4
2	Calculation and practical work	written	5-9
3	Monitoring	written	3-9

### 1.4 Other assessment objects

Is not provided by the work programme of the discipline.

### 1.5 Self-study

Name of self-study	Topic number
Lectures and practical classes preparation	1-9

## 1.6 Grading scale

Scales of assessment and procedures for assessing learning outcomes of the discipline are regulated by the Regulations on the current control of progress and interim attestation of students in higher education programmes and the Regulations on the scoring and rating system.

A **grading and rating system** is used to assess the learning outcomes of the discipline:

The final control of the discipline is an examination (or a differentiated test), the final grade being formed in accordance with the scale given in the table below:

Points	Grade
$\leq 54$	fail
55-69	satisfactory
70-84	good
$\geq 85$	excellent

### Grading scale

2 (points to 54)	Demonstrates a lack of understanding of the problem. Many of the requirements of the assignment are not met. An initial perception of the material is demonstrated. The work is incomplete and/or plagiarized.
3 (points 55-69)	Demonstrates a partial understanding of the problem. Most of the requirements of the task have been met. Mastery of the elements of the assigned material. The material is mostly clear and coherent.
4 (points 70-84)	Demonstrates considerable understanding of the issue by the discipline. All requirements of the assignment are fulfilled. The content of the completed tasks is disclosed and examined from different perspectives.
5 (points 85-100)	Demonstrates full understanding of the problem. All requirements of the assignment are fulfilled. Demonstrates proficiency in the discipline. The completed assignments are holistic, complete, structured, present different points of view and demonstrate creativity.