
Faculty «Digital Transformation»
Department of «Information systems»



7M06104
IT PROJECT MANAGEMENT

CATALOGUE ELECTIVE DISCIPLINES

2023 admission year

2023 y

Catalogue Elective Disciplines for EP IT Project Management developed on the basis of the EP curriculum.

Catalogue of elective disciplines discussed at the session of the Information Systems department

Protocol 6 from «1» 03 2023 y.

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The catalogue of elective disciplines was approved at the meeting of the Teaching and Learning Council of the JSC «International Information Technologies University» protocol 4 from «14» 03 2023.

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1 TERMS AND ABBREVIATIONS

1. The educational program is a common set of basic characteristics of education, including goals, results and content of training, organization of the educational process, methods and methods of their implementation, criteria for evaluating the results of training.

2. The content of the higher education curriculum consists of two cycles - basic disciplines (further - BD) and profile disciplines (further - PD).

3. The cycle of BD and PD includes disciplines of the university component (hereinafter referred to as UC) and (or) the elective component (hereinafter referred to as EC).

4. Catalogue of elective disciplines (CED) - a systematized annotated list of all the disciplines of the component by choice, for the entire period of training, containing their brief description with indication of the purpose of study, short content (main sections) and expected results of training. The CED reflects the punctuation and post-punctuation of each disciplines. CED should provide the opportunity for the trainer to choose alternative elective learning disciplines to form an individual educational trajectory.

5. Individual curricula are developed by the students through the educational program and CED with the help of the advisors.

6. Individual curriculum (IC) is the curriculum formed for each academic year by self-taught learners with the help of an advisor on the basis of the educational program and a catalogue of elective subjects and (or) modules;

7. IC defines the individual educational trajectory of each student separately. IC includes disciplines and learning activities (practices, research/experimental work, final certification forms) of the compulsory component (CC), the university component (UC) and the optional component (OC).

8. Advisor is a teacher who acts as an academic mentor, studying the relevant educational program, assisting in choosing the learning path (forming an individual curriculum) and mastering the educational program during the period of study.

9. University component - a list of compulsory disciplines determined by the university independently for mastering the educational program.

10. Optional component is a list of academic disciplines and corresponding minimum amounts of academic credits offered by the university, which can be chosen independently by students in any academic period taking into account their prerequisites and postrequisites.

11. Elective disciplines are the- academic disciplines, which are part of the higher education component and component by choice within the framework of established academic credits and introduced educational organizations, reflecting the individual training of the student, taking into account the specific social economic development and the needs of a particular region, established scientific schools.

12. Postrequisites are the disciplines and (or) modules and other types of learning work, the study of which requires knowledge, skills, abilities and competences acquired at the end of studying this discipline and (or) modules;

13. Prerequisites are the disciplines and (or) modules and other types of learning work containing the knowledge, skills, abilities and competencies required to master the subject being studied and (or) modules;

14. Competence is the ability to use in practice the knowledge, skills and abilities acquired during the learning process in professional activities.

2 ELECTIVE DISCIPLINES

№	Cycle of disciplines	Code of disciplines	Name of disciplines	Semester	Number of credits	Prerequisites
<i>Course 1</i>						
1	BD	SFT7118	Mathematical foundations for decision-making	1	5	Math 1, Math 2, Math 3, Algorithms, data structures and programming
2	BD	SFT7109	Mathematical programming	1	5	Applying mathematics and statistics in IT
3	BD	PM7702	Start-ups and innovation management	1	5	Project management
4	BD	PM7707	Innovation management	1	5	Management
5	PD	PM7703	Project communication and resource management	1	5	Project Management Basics, Time Management Basics
6	PD	PM7704	Effective communication in project management	1	5	Management theory and practice projects
7	PD	PM7100	IT and project management methodology and its documentation	2	5	Project Management Fundamentals, Information Technology (IT) Fundamentals
8	PD	PM7104	Flexible technologies in project management	2	5	Project management basics, IT and digital fundamentals
9	PD	PM7705	Project stakeholders and integration management	2	5	Project management, management
10	PD	MGT7705	Effective project team management	2	5	Economics for managers, business planning Innovative projects, theory and practice of management projects
<i>Course 2</i>						
1	BD	MRK7701	Marketing management	3	5	Economics and business, management basics, management.
2	BD	ECO7701	Economics for managers	3	5	Economic theory, management
3	PD	PM7701	Financial project management	3	5	Finance and accounting

4	PD	FIN7701	Advanced Financial Management	3	5	Economics for managers, Marketing management
5	PD	PM7107	Database management methods and business analytics	4	4	Methods of pattern recognition
6	PD	PM7113	Modern data analysis tools	4	4	Programming fundamentals, statistical and probability fundamentals, database and SQL

3 DESCRIPTION OF ELECTIVE DISCIPLINES

Description of discipline	
Code of discipline	SFT7118
Name of discipline	Mathematical foundations for decision-making
Number of credits (ECTS)	5
Course, semester	1, 1
Name of department	IS
Author(s) of course	Sinchev B.K.
Prerequisites	Math 1, Math 2, Math 3, Algorithms, data structures and programming
Postrequisites	Research work of a master's degree
Purpose of study discipline	The aim of the course is to develop students' skills and knowledge necessary for applying mathematical methods and models in making informed decisions. The course is aimed at studying analysis and optimization tools, probability theory and statistics, as well as mathematical modelling methods that allow to effectively solve problems in conditions of uncertainty and limited resources. Students learn to use quantitative methods for data analysis, risk assessment and selection of optimal strategies in various application fields.
Brief course description (main sections)	The course "Mathematical Foundations of Decision Making" is aimed at studying optimization methods, probability theory and statistics for data analysis and informed decision-making. Includes mathematical modelling, forecasting and risk assessment to help solve applications in conditions of uncertainty and limited resources.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Apply mathematical models to decision-making. - Analyze data and assess risks. - Use optimization methods and quantitative analysis. - Make informed decisions in uncertainty. - Apply project risk management techniques.

Description of discipline	
Code of discipline	SFT7109
Name of discipline	Mathematical programming
Number of credits (ECTS)	5
Course, semester	1, 1
Name of department	IS

Author(s) of course	Sinchev B.K.
Prerequisites	Applying mathematics and statistics in IT
Postrequisites	Research work of a master's degree
Purpose of study discipline	The purpose of studying the discipline is to teach students about optimization methods and tools with the application of information technology (IT) necessary for solving problems of resource management and decision making. The course is aimed at developing skills in building and analyzing mathematical models, as well as applying linear, non-linear and integer programming to find optimal solutions in various application fields such as economics, logistics and engineering, using modern IT tools.
Brief course description (main sections)	Linear and nonlinear programming: simplex method, modified simplex method, general transport problem, production and storage planning problems, integer programming problems and gradient methods. Optimization of linear differential systems based on the dynamic programming method and the Pontryagin maximum principle.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> -Ability to use the basic laws of natural sciences in professional activity, apply methods of mathematical analysis and modeling, theoretical and experimental research in natural and socio-economic sciences. -Ability to understand the theories and methods of applying mathematics and informatics for building qualitative and quantitative models in science, technology and technology. -Apply linear, non-linear and integer programming. -Develop and analyze mathematical models. -Use IT tools to solve optimization tasks. -Make informed decisions based on optimization methods.
Description of discipline	
Code of discipline	PM7702
Name of discipline	Start-ups and innovation management
Number of credits (ECTS)	5
Course, semester	1,1
Name of department	IS
Author(s) of course	Abdinova M. Kh.
Prerequisites	Project management
Postrequisites	Financial project management
Purpose of study discipline	The goal of studying the discipline is to form students skills and knowledge necessary for effective management of innovation processes and creation of start-ups. The course is aimed at learning methods of generating innovative ideas, their commercialization and strategies for developing start-ups, including attracting finance, managing risks and introducing innovations into business processes. Students learn to analyze the market, develop business models and manage innovative projects in an environment of uncertainty and high competition.
Brief course description (main sections)	Methods and tools for analyzing and evaluating the effectiveness of various types of innovations and methods for their implementation, based on investment analysis; Methods of financial assessments for comparing the costs of new technical solutions with their effectiveness; Methods for building a strategy for managing innovation and startups, taking into account the audit of the company's digital infrastructure in order to assess opportunities

Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Know the innovation processes and foundations of startups. - Able to develop business models and attract investments. - Possess start-up management and risk assessment skills. - Be competent in the design and implementation of innovative strategies. - Use information technologies of innovative management and effective methods of implementation of start-ups and IT projects.
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Description of discipline	
Code of discipline	PM7707
Name of discipline	Innovation management
Number of credits (ECTS)	5
Course, semester	1, 1
Name of department	IS
Author(s) of course	Balkenova A.
Prerequisites	Management
Postrequisites	Financial project management
Purpose of study discipline	The goal of studying the discipline is to form students knowledge and skills necessary for effective management of innovation processes in the organization. The course is aimed at studying methods of innovation development, implementation and management, strategies for enhancing competitiveness through innovation, as well as managing risks associated with the introduction of new technologies and products. Students learn to assess market opportunities, develop innovative business models and manage projects in a dynamic environment.
Brief course description (main sections)	This course focuses on innovation, what it is (or not), what it looks like (“search” and “choice”) and how it can be managed (“embedded” and “captured”). Innovation is not limited to creativity and new technical ideas, but also takes organizational aspects into account. The course aims to provide an opportunity to learn to use some of the tools and news ways of thinking that are better suited to solving the complex problems and opportunities inherent in modern organizations.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Understand the main types and stages of innovation implementation. - Develop and implement innovative strategies. - Manage innovative projects and evaluate their effectiveness. - Attract financing and manage the risks of innovation. - Coordinate resources and participants for successful business innovation - Use information technologies of innovative management and effective methods of implementation of start-ups and IT projects.

Description of discipline	
Code of discipline	PM7703
Name of discipline	Project communication and resource management
Number of credits (ECTS)	5
Course, semester	1, 1
Name of department	IS
Author(s) of course	Balkenova A.
Prerequisites	Project Management Basics, Time Management Basics

Postrequisites	Research work of a master's degree
Purpose of study discipline	The goal of studying the discipline is to form students skills and knowledge necessary for effective planning, organization and control of all aspects of communication and use of resources in a project using modern information technologies. The course is aimed at developing the ability to build digital communication strategies, interaction with stakeholders, and to master methods of allocation, optimization and control of resources using ITTools to achieve project goals within the time frame and budget.
Brief course description (main sections)	The course "Project communications and resources management" focuses on effective organization of collaboration and optimization of resource use in project activities. Includes the development of communication strategies, management of the stakeholders, planning and allocation of resources, as well as monitoring and evaluation of project progress. Special attention is given to the use of IT to improve management and automation processes.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> -Understand communication strategies and management of the steakhouses. - Manage and coordinate the distribution of resources. -Apply IT tools for monitoring and controlling projects. -To interact effectively with the team and make informed decisions.

Description of discipline	
Code of discipline	PM7704
Name of discipline	Effective communication in project management
Number of credits (ECTS)	5
Course, semester	1, 1
Name of department	IS
Author(s) of course	Balkenova A.
Prerequisites	Theory and practice of project management
Postrequisites	Research work of a master's degree
Purpose of study discipline	The goal of studying the discipline is to form students skills and knowledge necessary for building effective communication strategies using information technologies. The course is aimed at developing skills to effectively manage information flows, interact with a team and steakhouses, as well as resolving conflict situations using IT tools, which contributes to the successful implementation of projects and the achievement of set goals.
Brief course description (main sections)	The course "Effective communication in project management" studies methods and strategies for improving interaction within the team and with stakeholders. Focuses on managing information flows, resolving conflicts and building clear communication processes for successful project execution.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Understand the strategy of effective communication in projects. - Manage interaction with the team and the steakholders. - Use tools to improve information exchange. - Ensure clear and efficient communication in projects.

Description of discipline	
Code of discipline	PM7100
Name of discipline	IT and project management methodology and its documentation
Number of credits (ECTS)	5
Course, semester	1, 2
Name of department	IS
Author(s) of course	Serbin V.V.
Prerequisites	Project Management Fundamentals, Information Technology (IT) Fundamentals
Postrequisites	Research work of a master's degree
Purpose of study discipline	The aim of studying the discipline is to form students knowledge and skills in the application of information technologies and methodologies for effective project management and document circulation. The course is aimed at developing skills to plan, control and optimize project processes using modern IT tools, as well as organize and automate document flow to increase transparency and efficiency of project management.
Brief course description (main sections)	The course "IT and project management methodology and its documentation" covers the use of information technologies and methodologies for effective project management. Includes planning, control and optimization of project processes using IT tools, as well as document management and automation to improve transparency and efficiency of project management.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> -Understand IT-methodologies of project management. -Use IT tools for project planning and monitoring. -Automate and organize document flow. -Optimize design processes to increase efficiency.

Description of discipline	
Code of discipline	PM7104
Name of discipline	Flexible technologies in project management
Number of credits (ECTS)	5
Course, semester	1, 2
Name of department	IS
Author(s) of course	Amerkeshev R.B.
Prerequisites	Project management basics, IT and digital fundamentals
Postrequisites	Research work of a master's degree
Purpose of study discipline	The goal of studying the discipline is to form students skills and knowledge necessary for using flexible methodologies (Agile, Scrum, Kanban) and information technologies in project management. The course is aimed at developing the ability to adapt processes to rapidly changing conditions, effectively use IT tools for resource allocation, team management and interaction with stakeholders to achieve successful project results in an uncertain environment.
Brief course description (main sections)	The course "Flexible technologies in project management" covers the use of flexible methodologies and IT tools for project management. The main sections include Agile, Scrum, Kanban, adapting processes to

	change, using IT for planning and control, as well as effective team management and interaction with stakeholders.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Understand and apply the principles of Agile, Scrum and Kanban. - Use IT tools for project management. - Adapt processes to change and uncertainty. - Effectively manage teams and interact with stakeholders.
Description of discipline	
Code of discipline	PM7705
Name of discipline	Project stakeholders and integration management
Number of credits (ECTS)	4
Course, semester	1, 2
Name of department	IS
Author(s) of course	Amerkeshev R.B.
Prerequisites	Theory and practice of project management
Postrequisites	Research work of a master's degree
Purpose of study discipline	The goal of studying the discipline is to form students skills and knowledge necessary for effective interaction with the stakeholders and integration of all project processes. The course is aimed at learning methods of identification, analysis and management of expectations of stakeholders, as well as to develop skills for integration of project elements in order to ensure successful implementation of the project within the set goals, deadlines and budget. Students learn to coordinate resources and processes to achieve project integrity.
Brief course description (main sections)	Project stakeholders, as a rule, make efforts to a greater or lesser extent to favor the completion of the project, although they can sometimes negatively affect the project if they believe that its further development begins to ignore or infringe on their interests. As a result, the theory and practice of project management devote considerable attention to the classification of stakeholders, the analysis of their interests and, ultimately, the management of their behavior..
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Identify and manage the steaks. - Develop communication and communication strategies. - Coordinate the integration of all project elements. - Manage changes in the interests of the steak holders. - Communicate and resolve conflicts in a project effectively. - Apply methods of managing stakeholders and project partners

Description of discipline	
Code of discipline	MGT7705
Name of discipline	Effective project team management
Number of credits (ECTS)	5
Course, semester	1, 2
Name of department	IS
Author(s) of course	Kamysbaev M.K.
Prerequisites	Theory and practice of project management
Postrequisites	Research work of a master's degree

Purpose of study discipline	The goal of studying the discipline is to form students knowledge and skills necessary for successful management of project teams. The course is aimed at learning methods of construction, motivation and coordination of work teams, development of leadership skills, conflict management, as well as improving the effectiveness of communications within the team. Students learn to use management tools to achieve team goals and ensure successful project implementation.
Brief course description (main sections)	All parts of modern science management team project are represented. Considered the procedural human resources of the project. Particular attention is paid to the socio-psychological structure of the team. The stages of team development are considered in detail. Spatial-temporal characteristics of the conflict are studied: conditions, reasons, frequency and form of conflict interaction.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Possess project management and development team skills; be able to manage stakeholders; be able to use information technology for project management; have flexible approaches in project management. -Organize and manage the communications, team and staff development of the project. - Apply motivation and leadership techniques. - Effectively communicate and resolve conflicts in the team. - Evaluate and improve the team's performance. -Adapt the team to changes and stressful situations.

Description of discipline	
Code of discipline	MRK7701
Name of discipline	Marketing management
Number of credits (ECTS)	5
Course, semester	2, 3
Name of department	IS
Author(s) of course	Adilova A.M.
Prerequisites	Economics and business, management basics, management.
Postrequisites	Financial project management
Purpose of study discipline	The purpose of the discipline is to form a comprehensive understanding of the company's management on the principles of marketing, reflecting the relationship of strategic and tactical marketing decisions and assessing the impact of these decisions on business performance. The course studies the theoretical foundations and categorical and conceptual apparatus of marketing management, as well as mastering practical skills in applying the elements and principles of marketing management in the activities of firms and companies.
Brief course description (main sections)	The course covers theoretical foundations and categorical-conceptual apparatus of marketing management, as well as mastering practical skills in applying elements and principles of marketing management in the activities of firms and companies. The discipline's goal is to form an integrated view of the company's management based on marketing principles, reflecting the relationship between strategic and tactical marketing decisions and assessing the impact of these decisions on business performance.

Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Understand the basic concepts of marketing, including market segmentation, target audience and marketing mix. - Develop and implement effective marketing strategies and plans. - Evaluate the effectiveness of marketing campaigns and manage marketing budgets. - Apply digital marketing tools to promote brands and products. - Manage the brand and adapt marketing strategies to changes in the market environment. - To have the opportunity to conduct marketing research on the market of high-tech products; - have the ability to model and define stages of the life cycle of innovation according to economic and financial criteria.
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Description of discipline	
Code of discipline	ECO7701
Name of discipline	Economics for managers
Number of credits (ECTS)	5
Course, semester	2, 3
Name of department	IS
Author(s) of course	Adilova A.M.
Prerequisites	Economic theory, management
Postrequisites	Financial project management
Purpose of study discipline	The aim of the course is to provide students with practical economic tools and knowledge for making informed management decisions. The course is aimed at developing an understanding of key economic processes and mechanisms that affect organizations' activities, as well as developing skills in market analysis, resource management and economic risk assessment, What contributes to effective management of business in the context of changing external and internal environment.
Brief course description (main sections)	The purpose of the discipline is to form a clear relationship between the conclusions of economic theory and real market practice. This course covers the main sections of modern economic theory necessary for a manager. Methods for solving economic problems in market conditions are considered.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> -Able to assess the internal and external environment of companies and projects - Possess skills in financial analysis of companies and projects, - To draw up strategies for the development of the company through projects. -To have the opportunity to conduct marketing research on the market of high-tech products; - Have the ability to model and define stages of the life cycle of innovation according to economic and financial criteria.

Description of discipline	
Code of discipline	PM7701
Name of discipline	Financial project management
Number of credits (ECTS)	5
Course, semester	2, 3
Name of department	IS
Author(s) of course	Kobadilov B.N.

Prerequisites	Finance and accounting
Postrequisites	Project quality and risk management
Purpose of study discipline	The objective of the course is to develop students' skills and knowledge necessary for effective planning, allocation and control of financial resources within projects. The course is aimed at learning methods of project costing, cost management, attracting funding and minimizing risks, which promotes successful implementation of projects in accordance with budget and time frame. Students learn to use financial instruments to improve the efficiency of project activities.
Brief course description (main sections)	This course explores the basic financial concepts in business and project, financial report data and how these reports affect each other, the use of budgets and estimates for planning and cost control, project success indicators, earned value analysis, and forecasting. The course also helps you gain the necessary project and financial management skills to confidently motivate, communicate, make real-time decisions, and achieve business results that support the strategic goals of your team or organization.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> -Understand the basics of financial planning and project cost estimation. - Develop budgets and monitor project costs. - Prepare financial statements and accept financial decisions. -Manage quality, project deadlines by taking optimization decisions on the project financial management of projects. - Know the basics of project integrations and be able to manage the content of the project; be able to draw up a project plan; - Possess skills in project investment analysis; - Be able to manage the cost and purchase of a project, be able to manage the quality and risks of a project.

Description of discipline	
Code of discipline	FIN7701
Name of discipline	Advanced Financial Management
Number of credits (ECTS)	5
Course, semester	2, 3
Name of department	IS
Author(s) of course	Balkenova A.
Prerequisites	Economics for managers, marketing management
Postrequisites	Project quality and risk management
Purpose of study discipline	The goal of studying the discipline is to form students with in-depth knowledge and skills for strategic financial decision making in the face of complex business environments and uncertainty. The course is aimed at learning methods of corporate financial management, asset valuation, investment and risk management, as well as developing financing strategies to achieve long-term sustainability and growth. Students learn to apply financial instruments to optimize the capital structure and improve resource management efficiency.
Brief course description (main sections)	This course covers a wide range of financial issues, including working with financial statements, assessing future cash flows, evaluating bonds and stocks, assessing risk and profit, evaluating capital budgeting decisions. The course is intended for undergraduates intending to work

	in various industries who will face difficulties in making financial decisions.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Develop financial strategies and optimize capital structure. - Manage investments and portfolios with a risk-based approach. - Make strategic financial decisions for sustainable growth. - Manage quality, project deadlines by taking optimization decisions on the project financial management of projects. - Know the basics of project integrations and be able to manage the content of the project; - Be able to draw up a project plan; possess the skills of investment project analysis; - Be able to manage the cost and purchase of a project, be able to manage the quality and risks of a project.

Description of discipline	
Code of discipline	PM7107
Name of discipline	Database management methods and business analytics
Number of credits (ECTS)	4
Course, semester	2, 4
Name of department	IS
Author(s) of course	Sharipov B.Zh.
Prerequisites	Pattern recognition methods
Postrequisites	Research work of a master's degree
Purpose of study discipline	The goal of studying the discipline is to form students skills and knowledge necessary for effective data management and their analysis in the business environment. The course is aimed at learning methods of organizing and managing databases, tools for data analysis, as well as how to use them to support business decision-making. Students learn to design databases, work with large amounts of data and use analytical methods to improve business processes and optimize operations.
Brief course description (main sections)	The course studies methods and tools for modeling processes and systems, methods for modeling business processes of systems, basic means of computer modeling and organizing computational experiments. At the end of the course, undergraduates will master the skills of designing and developing the design of information systems and databases using modern cloud and network tasks. To solve problems, the course offers a range of computer tools to choose from.
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Know the principles of relational and non-relational database management. - Know SQL for data extraction and processing. - Understand data warehouse design methods and ETL processes. - Use business analytics tools for data analysis and visualization. - Manage big data and predictive analytics to improve business processes. - Apply the methods of business analysis, audit and systems analysis of information systems.

Description of discipline	
Code of discipline	PM7113

Name of discipline	Modern data analysis tools
Number of credits (ECTS)	4
Course, semester	2, 4
Name of department	IS
Author(s) of course	
Prerequisites	Programming fundamentals, statistical and probability fundamentals, database and SQL
Postrequisites	Research work of a master's degree
Purpose of study discipline	The purpose of the discipline is to teach students how to use advanced methods and tools for analyzing large amounts of data. The course is aimed at mastering data processing, visualization and interpretation technologies to support business decision-making. Students learn modern analytical platforms and software to extract valuable information from data, which allows them to improve business processes and increase the efficiency of organizations.
Brief course description (main sections)	This course explores a cyclical process, including awareness of the degree of need for information protection and setting goals; collection and analysis of data on the state of information security in the organization; assessment of information risks; planning risk treatment measures; implementation and implementation of security in projects
Expected results of the study (acquired by students knowledge, skills and competence)	<ul style="list-style-type: none"> - Understand the methods and tools of data analysis. - Work with Python, R, Power BI, Tableau for data analysis and visualization. - Apply machine learning and predictive analytics. - Process big data using Hadoop and Spark. - Use data to support management decisions and optimize business processes. - Apply the methods of business analysis, audit and systems analysis of information systems.