In the process of learning, students receive the following competencies:

• ability to navigate modern Information Technology (IT) trends and select adequate IT solutions for businesses;

• ability to manage the life cycle of IT innovations and startups;

• ability to manage the IT infrastructure of an enterprise (including electronic);

• ability to provide information security for networks and applications.

In this case, special attention is paid to practice. More than 20% of the curriculum is devoted to the implementation of practical interdisciplinary projects and project workshops under the guidance of representatives of partner organizations from the business world. The graduate is immediately ready for practical work, which is a great advantage in finding employment and building a career.

We take into account the individual needs and abilities of students, providing individual learning paths, and the use of distance learning technologies and e-learning makes it possible to develop programs regardless of location, to combine learning with work.

The market is experiencing a clear shortage of personnel with such training. Therefore, graduates often have the choice between several employers.

Heads of the academic areas are trained in the field of electronic business, web development, enterprise resource planning (ERP) / customer-relationship management (CRM) systems are even more in demand on the market.

Having received such training, graduates gain a great advantage in performing practical work and building a business career in the field of system integration, business intelligence, business application development, and the financial sector.

The program may be studied by students from other countries who plan to develop their own business in various electronic platforms.

**Decision Support Tools**

**9 ECTS**

**Control**

Module project

**Disciplines module**

Mathematical Modeling

Theory of decision making

Philosophical problems of science and technologies

In a systematic form, decision support tools give an idea about devices and the main trends in the development of modern science. The interrelation of science with other spheres of human activity, features of the interpenetration of modern science and technology are demonstrated. A consistent analysis of the problems of scientific and technological development of modern society is conducted. Discussions on trends and prospects for the development of man-made society are also engaged in. The module allows students to develop proficiency in modern mathematical tools of econometric, simulation modeling and mathematical economics in the field of information systems management in applied areas to determine the development strategy of organizations or its divisions.

The implementation of the project following the successful completion of the module, allows the student to acquire practical skills in using decision-making tools in the real environment.

**IT Innovation in Business**

**9 ECTS**

**Control**

Module project

**Disciplines module**

Security of systems and applications

Virtual System

Innovations in Business and IT

The goal of the “IT innovations in business” module is to develop master's students competencies in the use and implementation of innovative information technologies, software systems at real business facilities, the ability to work with information purposefully, using computer information technology, modern technical means and methods.

The module allows students to acquire the theoretical knowledge and skills necessary to create and adapt new methods for securing and protecting networks and applications when developing an organization’s information security policy.

The project implementation phase provides practical skills in implementing IT innovations using the example of a real enterprise and ensuring the protection of information from applications and networks.

**Development of Web Applications for Business**

**6 ECTS**

**Control**

Module project

**Disciplines module**

Web technologies in business

Development of Web Applications

The module allows students to provide theoretical and practical knowledge and skills in the development of Internet applications based on the .NET platform, creating web applications using ASP.Net technology, working with server controls and validating user input. In the course of studying the module, the architecture of the .Net platform is considered, working with the Microsoft Information Server web server. We study the current trends in the management of integrated services, platforms, content, information resources, modern requirements for obtaining information, data search and analysis, data integration. Practical skills of Web programming are formed using various tools for developing, adapting and maintaining Web applications.

The implementation of the project at the end of the module, “Development of Web Applications for Business”, provides practical skills for creating an electronic resource for business and its management.

**English (advanced)**

**3 ECTS**

**Control**

Integrated exam

**Disciplines module**

English (advanced)

The module aims to improve the initial level of proficiency in a foreign language, achieved at the previous stage of training. A foreign language (professional) as a module serves to improve the educational process and is characterized by interdisciplinary (the content of speech in a foreign language can be information from different areas of knowledge: economics, management, etc.) and multidimensionality, which makes necessary the real integration of a foreign language into the general training program.

**E-business tools**

**6 ECTS**

**Control**

Integrated exam

**Disciplines module**

E-business. Part 1

E-business. Part 2

The purpose of studying the module is to develop students' knowledge and skills in the virtual environment as a whole and on the features of the functioning of e-business, including the industry formation and using new information technologies and products, telecommunication technologies and products, telecommunication services, e-business, electronic markets, telebanking different countries and regions.

Acquired theoretical knowledge and practical skills will allow students to analyze existing business models of players in the network economy markets, form an enterprise strategy in a network economy, and design new business models.

**Methods of data analysis and modeling**

**6 ECTS**

**Control**

Integrated exam

**Disciplines module**

Data Warehouse and OLAP-system

Data analysis

The purpose of the module is to gain practical skills in the field of basic methods for assessing, analyzing and forecasting macroeconomic indicators, organizational and methodological issues of building and operating corporate analytical management systems, developing skills for effectively using analytical methods based on application packages, developing practical skills for collecting and analyzing structured Information Using Data Warehouse Technologies, ETL, OLAP, Data Mining, Knowledge Discover in Databases, Formation practical skills to achieve business goals through best use of available data.

The module studies OLAP-tools, which are tools for flexible viewing of information in various sections, automatic acquisition of aggregated data, performing analytical convolution operations, granularity, comparisons over time. Due to this, OLAP-systems are a decision-making tool with great advantages in the field of data preparation for all types of business reporting, involving the presentation of data in different sections and different levels of hierarchy.

**Information e-business technologies**

**9 ECTS**

**Control**

Module project

**Disciplines module**

Intelligent Agents and Multi-Agent Systems

Corporate Networks

Management of Software Development

The purpose of the module is the formation of information and analytical competencies in the field of telecommunications, network structures, information systems, which make it possible to significantly improve business efficiency and create fundamentally new directions for its development. Objectives include: the formation of the necessary knowledge to address issues related to the construction of an effective infrastructure of e-commerce enterprises; development of advanced user skills for using object-oriented information technologies for solving e-business problems, developing sensitivity to strategic decisions, acquiring students the skills to create the most universal scalable corporate network that allows integration of existing and future business applications with the lowest possible restrictions, the formation of practical skills management software development.

The implementation of the project equips students with practical skills in creating an intellectual information system for any given business.

**Data management**

**9 ECTS**

**Control**

Module project

**Disciplines module**

Computational methods of content management

Information management and data storage

Management of Large Scale Social Networks

The purpose of the study module is the acquisition by students of practical skills in the field of various methods of data management: computational methods, social network data management, information management and data storage.

The implementation of a project in the module enables students to apply various methods of data management in the enterprise environment.

**Analysis and Design of Information Systems for Business**

**3 ECTS**

**Disciplines module**

Analysis and Design of Information Systems for Business

The purpose of studying the module is to acquire practical skills in working with information technologies for analyzing complex systems and methods of designing information systems based on international standards; teaching students the principles of constructing functional and information models of information management systems, analyzing the results obtained, and using tools to support the design of economic information management systems.

**Modeling and optimization of business processes**

**3 ECTS**

**Discipline module**

Modeling and optimization of business processes

The purpose of studying the module is to form students' theoretical knowledge and skills in the field of system analysis and reengineering of information processes, modeling information processes, using and developing methods for formalizing and algorithmizing information processes with the goal of solving the problems of enterprises and organizations.

**Project activity "Management of IT projects"**

**12 ECTS**

**Control**

Module project

**Discipline module**

Project Workshop

The module is devoted to the organization of project activities and IT project management at all stages of the life cycle.

The purpose of studying the module is to provide students with theoretical and practical knowledge and the skills in the area of creating and managing projects, allowing them to carry out a survey of the subject area, analyzing the stage of the life cycle of the enterprise information system, developing the necessary applications and developing the enterprise information system project.

**Project activity "Intellectual start-ups"**

**12 ECTS**

**Control**

Module project

**Discipline module**

Project Workshop

As part of the module, a project is conceived and developed to create or develop an existing business through the development and implementation of an IT product. Within a stipulated time frame, its main elements are implemented: information system diagnostics and development prospects, defining a strategic business development plan, building a complete enterprise model, developing a business development project, implementing an IT business development project by creating a web application, working out a business plan for implementing an IT product, marketing and organizational IT product implementation plan, project risks, IT product implementation project, IT product development.

**Practice and research work**

**51 ECTS**

**Control**

Integrated exam

**Disciplines module**

Research work

Pre-diploma practice

Internship

Practical training

The purpose of the practice is to develop professional skills of the master in the process of developing the full model of the enterprise architecture: examining the automation object, identifying the main and auxiliary business processes, analyzing the structure and functionality of the enterprise information system, establishing relationships between them and visualizing the results obtained using notations (standards of description) and modern application packages. The master's student, who has undergone the practice of obtaining primary professional skills, acquires the skills not only of analyzing the enterprise's architecture, but also of its development and management.

As a result of the internship, the undergraduate student should be able to create a complete model of the life cycle of the information system of a particular company (or its part), develop proposals for improving individual business processes and automate them based on the information system of the enterprise taking into account the current stage of the IP life cycle stages of the life cycle of the enterprise itself, as well as develop a management plan for the relevant IT project using modern IT tools.

In the course of internship, the student must learn to systematize and analyze the qualitative and quantitative characteristics of internal and external economic processes affecting the financial viability of the enterprise in a modern market economy, to study information systems and technologies in the enterprise. In the process of passing the pre-diploma practice, the student is engaged in conducting a theoretical study on the topic of the master's thesis, describing the research methodology, collecting and processing data for the theoretical and practical chapters of the master's thesis.

The research work of the master's students takes place in the form of individual independent work under the guidance of the supervisor. Master's students conducts scientific research individually or as part of a research team, the results of which are presented at scientific conferences and published in the form of abstracts of reports, scientific articles and individual sections of the master's thesis. The master's student becomes well acquainted with the ethical norms and rules adopted in the scientific community, the scientific style of oral presentations and texts of publications, methodological approaches to conducting scientific research, as well as gains the skill of leading scientific research as part of a team.

**State final attestation**

**6 ECTS**

**Master's thesis**

The purpose of the state final certification is to establish the level of preparedness of the student's understanding of the educational program (the master's degree) so as to perform professional tasks and conformity of training received to the requirements of the federal state educational standard of higher education.