Annex A.5

Brief description of the study programme 38.04.05_05 Digital Marketing and E-Business

Training direction: 38.04.05 Business Informatics
Master's program: 38.04.05_05 Digital Marketing and E-Business
Qualification: master

1. List of structural units implementing the program

Master's degree program in the specialization 38.04.05_05 Digital Marketing and E-Business is implemented at the Institute of Industrial Management, Economics and Trade, the graduate school – Graduate School of Management and Business.

Teachers of the Graduate School of Management and Business, the Department of Fundamentals of Economics and Management, the Graduate School of Linguistics and Translation are involved in the implementation of the Master's program.

2. Mission, goals of the basic educational program (BEP)

The mission of the master's program is to provide high-quality, affordable, competitive at the world level education, transformed through the development of scientific and educational technologies for graduates of a new formation, capable of practical implementation of the knowledge gained in science, production, and business.

The mission of the program corresponds to the tasks facing domestic and foreign companies.

The purpose of specialized training of masters in the program "Digital Marketing and Electronic Business" is the formation of the following competencies: creation, reorganization and development of enterprise architecture and enterprise management models based on the use of digital solutions to achieve strategic goals.

The uniqueness of the master's program "Digital Marketing and E-Business" lies in the focus on the ongoing change in the management models of organizations in Russia and the world, caused by the processes of digitalization of the economy and digital transformation of enterprises, a qualitatively new level of service delivery in the modern digital space.

1. Graduates of the master's degree will have competencies that will enable business change, using digital tools and technologies to help companies drive further development. The formed competencies will allow graduates to work in positions in the areas of e-business and IT infrastructure development, as researchers and developers of information systems and technologies for digital organizations, managers of various levels, managers of reorganization projects in organizations, business analysts, academic and scientific and technical institutes, universities and other educational institutions. A feature of the preparation of masters in this program is the combination of fundamental knowledge in the field of e-

business management, projects in the field of e-commerce and digital marketing,

2. Involvement in the training process of leading specialists from the IT sphere and the sphere of e-business management in order to transfer to masters practical experience in digitalization of the main, managerial and supporting processes of enterprises and assessing business efficiency.

3. Integration into the curriculum of disciplines as a basic module, focused on deepening knowledge in the field of management theory based on process and project approaches, and profile focus, focused on solving real cases and analytical problems on the examples of existing marketing agencies, enterprises that implement and use digital solutions in their activities.

4. The uniqueness of the master's program is determined by the combination of managerial, economic, mathematical, social and IT disciplines, adapted to the specifics of e-business management, giving a holistic view of the main aspects, methods and information technologies of e-business management. Formed competencies allow program graduates to analyze the current state of business digitalization and develop management decisions based on the results obtained.

5. A large number of disciplines are supported by standards widespread in the Russian Federation and around the world (TOGAF, PRINCE2, ITIL, etc.), technologies and tools for enterprise management: Business Studio software product, which allows auditing and reengineering of an organization's business processes; ArchiMate modeling - a tool for modeling enterprise architecture, Microsoft Project - a software product for project management; Qlik View - a business intelligence tool that allows to create analytical reporting systems.

6. Combination of both classical approaches and teaching methods (lectures and practical classes) and new, active methods, case sessions, scientific and practical activities. In teaching, we use cases developed jointly with the leading consulting companies of St. Petersburg (LLC SAP CIS, LLC KORUS CONSULTING GK, LLC Dialog IT). Classes are taught by both teachers of the Graduate School of Management and Business, who have international certifications, and teachers with practical managerial experience in marketing agencies and IT companies.

3. Requirements for the applicant

Persons with higher education of any level, the presence of which is confirmed by a document of the established form, are allowed to master the BEP. Admission to training is carried out for the first year. The procedure and conditions for admission are regulated by the Rules of admission to study for master's programs at the federal state autonomous educational institution of higher education "Peter the Great St. Petersburg Polytechnic University", which are approved for each year of admission.

4. Areas of professional activity and (or) areas of professional activity in which graduates who have mastered the educational program can carry out professional activities:

06 Communication, information and communication technologies;

as well as spheres:

- research;
- innovative and entrepreneurial.

Graduates can carry out professional activities in other areas and (or) spheres of professional activity, in case if their level of education and acquired competencies correspond to the requirements for employee qualifications.

5. Type (types) of tasks of professional activity, for the solution of which the graduate should be ready:

- research;
- innovative and entrepreneurial.

6. Professional standards in accordance with which the Basic Professional Educational Program of Higher Education is developed:

№	Conjugate professional standard (PS) or other grounds for including a professional competence (PC) in the educational program (EP) (name and details of documents)	Selected generalized labor function (GLF)	Labor function (LF), the preparation of the execution of which is directed by the professional competence (PC)
1.	06.016 Professional standard "Project manager in the field of information technology", approved by order of the Ministry of Labor and Social Protection of the Russian Federation dated November 18, 2014 No. 893n	B7. IT project management based on received project plans in conditions when the project does not go beyond the approved parameters	B/25.7 Team building and development of the project team in projects of small and medium complexity in the field of IT
			B/30.7.Collection of information for initiating a project in projects of small and medium complexity in the field of IT
			B/31.7. Planning for small to medium complexity IT projects
			B/32.7 Organization of project execution in projects of small and medium complexity in the field of IT
			B/33.7 Monitoring and managing project work in small and medium IT projects
			B/35.7 Completion of the project life cycle (LC) phase

			in projects of small and medium complexity in the field of IT
			B/36.7 Project Completion in Small and Medium IT Projects
			B/55.7 Communication planning for small and medium IT projects
			B/56.7 Identification of Stakeholders in Small and Medium IT Projects
			B/58.7 Stakeholder Management for Small and Medium IT Projects
			B/59.7 Planning risk management for small and medium IT projects
			B/60.7 Risk identification in small and medium IT projects
			B/61.7 Risk analysis in small and medium IT projects
			B/62.7 Monitoring and Risk Management in Small and Medium IT Projects
2.	06.012 Professional standard "Product Manager in the field of information technology", approved by order of the Ministry of Labor and Social Protection of the Russian Federation dated November 20, 2014 No. 915n	D7 Product Portfolio and Product Management Division	D/01.7 Management of New Market Research
			D/02.7 Product portfolio management
			D/03.7 Develop processes and practices for managing products and integrating them with the rest of the organization
			D/04.7 Selection, recruitment and management of product managers
			D/05.7 Organizing the sale and purchase of assets that enhance the success of the product portfolio

7. Structure and content of BEP

The educational program is implemented through a system of disciplinary modules and a module of state final certification.

The Master's program consists of the following types of modules:

General scientific module (Fundamentals), within which the development of universal, general professional, as well as mandatory professional competencies takes place. The general scientific module includes compulsory disciplines: History and methodology of science; Foreign language in professional activities; Scientific discourse.

Professional modules (Professional), within which the development of universal, general professional, as well as professional competencies takes place, which include:

a) basic module of the direction - a set of disciplines (modules) that form knowledge, skills and abilities in the direction of training.

b) a module of profile orientation, which determines the orientation of training.

Mobility module is an educational cycle within the educational program, which represents an additional educational trajectory for students in addition to training in the main educational direction.

The module of project activity (Project) is an independent activity of students, focused on solving a certain practically or theoretically significant problem, implemented within the framework of disciplines, practices, research work.

The module "State final certification" includes: the defense of the final qualifying work and the state exam(s) (if any).

Optional disciplines aimed at the socio-cultural development of students.

The learning outcomes by disciplines (modules) are correlated with indicators of achievement of competencies and ensure the gradual formation of the competencies of the graduate of BPEP of HE.

Structure and scope of the educational program

The structure of BPEP of HE	Volume BPEP of HE (credits)
BLOCK 1 "Disciplines (modules)"	60
BLOCK 2 "Practice"	54
BLOCK 3 "State final certification"	6
Total	120
BLOCK 4 "Electives"	6

7.1. Competence-based curriculum and academic schedule calendar

The competence-based curriculum includes two interrelated components: competency-forming and disciplinary-modular. The competence-forming part of the curriculum connects all the obligatory

competencies of the graduate with the sequence of studying all academic disciplines, practices, etc. The disciplinary-modular part of the curriculum reflects the logical sequence of mastering the elements of BEP, ensuring the formation of competencies.

The curriculum defines the list, labor intensity (in credit units and academic hours), sequence and semester distribution of disciplines (modules), practices, forms of intermediate certification of students, state final certification, the volume of contact work between students and the teacher (by type of training) and independent work of students.

The academic calendar indicates the periods of the types of educational activities and the periods of vacations.

7.2. Work programs of disciplines (modules), practice programs

The work program of the discipline (module) is developed in accordance with the independently established educational standard of higher education in the direction of preparation 38.04.05 "Business Informatics", approved by the decision of the Academic Council of SPbPU dated 06/26/2017, Protocol No. 6, as well as according to the curriculum for training in BEP 38.04.05_05 Digital marketing and E-Business.

7.3. Practice programs

Practices are a compulsory section of BEP and are a type of training sessions directly focused on the professional and practical training of students. Practices consolidate the knowledge and skills acquired by students as a result of mastering theoretical courses in special disciplines, develop practical skills and contribute to the integrated formation of general cultural and professional competencies of students.

In the master's program, within the framework of educational and industrial practice, the following types of practices are established:

a) types of training practice: practice in obtaining primary professional skills;

b) types of industrial practice: practice to obtain professional skills and professional experience; research work; pre-graduation.

7.4. Funds of evaluation tools for the current and intermediate certification of students in the discipline (module), practice

The fund of assessment tools for conducting the current and intermediate certification of students in the discipline (module) and practice are included in the work program of the discipline (module) and the practice program, respectively, is drawn up in the form of applications to the programs.

7.5. Documents regulating the organization of students' research work

Documents regulating the organization of students' research work are developed and drawn up in accordance with the following list of local acts:

- Regulations on scholarships and other forms of material support for students of the federal state autonomous educational institution of higher education "Peter the Great St. Petersburg Polytechnic University", approved by Protocol No. 7 of June 29, 2020;
- The order for the main activity "On the holding of the youth competition of the FSAEI of HE “SPbPU” for achievements in research work"

dated October 28, 2020 No. 1686;

- the requirements for the organization of research work of students, specified in the work program "Research work" of masters.

7.6. Fund of assessment means for state final certification

The fund of assessment means for the state final certification is developed for the implementation and protection of the final qualifying work. In the course of the final state certification, the degree of compliance of the formed competencies of graduates with the requirements of this educational standard and the implemented educational program is assessed.

The fund of assessment means includes: the program of state final certification, including requirements for final qualifying works and the procedure for their implementation, criteria for assessing the results of defense of final qualifying works.

8. Places of practice and employment

Students can undergo industrial practice in consulting companies that develop and implement digital solutions for business. There are a number of long-term agreements on internships between SPbPU and LLC "NAUKA", LLC "KORUS CONSULTING GK", LLC "Dialog IT".

9. Material and technical base for educational and scientific activities

The material and technical base of the educational program of the magistracy ensures the conduction of all types of classes, disciplinary and interdisciplinary training, laboratory, practical and research work of students, provided by the curriculum and corresponding to the current sanitary and fire rules and regulations.

The list of material and technical support required for the implementation of Master's programs includes:

- classrooms for lecture-type classes, seminar-type classes, group and individual consultations, monitoring and intermediate certification;
- rooms for independent work;
- rooms for storage and preventive maintenance of educational equipment;
- laboratories equipped with standard and specialized software.

To implement the training of masters in the direction 38.04.05 Business Informatics at the Institute of Industrial Management, Economics and Trade, the laboratories equipped with the necessary equipment are present:

- research laboratory "Digital technologies in business and education". The research laboratory was created in order to widely attract the teaching staff, graduate students, undergraduates and students. The use of the Laboratory is a necessary element of the implementation of the research and educational process. The laboratory was organized to carry out research projects funded from competitions for grants from the Russian Humanitarian Science Foundation, RFBR and other sources. Research carried out in the Laboratory is included in research plans. The book value of the equipment is RUB 902,968.20.

– educational laboratory "Modern management technologies". The educational laboratory was created to provide the educational process with information and technical means and programs, as well as for the use and implementation of information technologies in scientific and innovative activities. The book value of the equipment is RUB 1,692,480.00.

10. Competitive advantages of graduates and possible places of employment

The training of undergraduates is carried out on the basis of SPbPU.

In training, we focus on practicing teachers who are familiar with constantly updated modern methods and tools of digital marketing. Some of the classes with undergraduates are conducted by leading specialists of IT companies (SAP CIS LLC, Project Management LLC, etc.).

Students on the program have the opportunity to practice at marketing agencies, engineering companies, consulting companies for the development of enterprise architecture and digital marketing, IT companies.

11. The international cooperation

The main international partner is TWENTE University (Netherlands).

In the framework of scientific research, there is a collaboration between Professor Peter Schür and assistant Berry Gerrits. As part of joint research, they cover the topics of digitalization of business, logistics, and also consider the peculiarities of the development of various industries in St. Petersburg and Rotterdam. Moreover, one of the most important partners is Klara Souli, with whom cooperation is not only in publishing and teaching, but also in organizing and moderating the conference “Digital Technologies in Logistics and Infrastructure” organized by GSMB.

12. Main scientific directions and schools

The teachers involved in the implementation of the educational program are engaged in research activities within the framework of scientific areas on the topics "Integrated architectural solutions for business in the context of the digitalization of the economy", "Digital ecosystems", "Digital models of enterprise management", "Reengineering of digital organization processes", etc.

Within the framework of grants financed by the Russian Science Foundation and the Russian Foundation for Basic Research (RSF grant "Digital transformation of Russian business: development of theory and methodology", 2019-2021; RFBR grant "Improving the economic efficiency of managing medical organizations in the context of digital transformation", 2019-2021., RFBR grant "Methodology for the implementation of end-to-end digital technologies in the system of geographically distributed medical organizations", 2020-2022), since 2019, teachers of the Graduate School of Management and Business have been developing a theoretical and methodological basis for the design, modeling and improvement of the integrated architecture of enterprises, systems of business processes, digital architectural solutions, reference business and digital architectures for specific industries.

13. The most significant results and achievements

The results of the implementation of the Master's program "Digital Marketing and E-Business" are two graduates of students (10 people - graduation in 2019, 11 people - graduation in 2020). Currently, two students are receiving SPbPU scholarships for the achievements in scientific researches. The teachers involved in the educational process of this program conduct research in the field of digital transformation of enterprises and organizations, process and project management of an enterprise, the development of marketing communications using digital services, etc. Research carried out by teachers and students is reflected in publications posted in collections of international scientific and practical conferences.

Annotations of the educational program elements 38.04.05_05 «Digital marketing and E-Business» (disciplines, practices and state final certification)

<table>
<tr><th colspan="5">Иностранный язык в профессиональной коммуникации (Foreign language in professional communication)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Achieving practical knowledge of a foreign language, allowing them to use it in their future professional activities and scientific work, as well as in everyday communication; creation of a base for correct understanding, translation, and processing of foreign language texts; development of communicative academic competence, allowing students to present scientific products (articles, abstracts, reports, etc.) in the academic environment.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. The profession of an accountant. Financial and managerial aspects. Accounting standards and audit. Discussion of negotiations to conclude an alliance.
2. The main aspects of accounting practice. Accounting and financial reporting. Discussion of negotiations to conclude an alliance.
3. Assets, liabilities, equity of the company. Tangible and intangible assets. Discussion of negotiations to conclude an alliance.
4. Accounting for purchases and cash payments. The main accounting journal. Business accounts. Discussion of negotiations to conclude an alliance.
5. Break-even point. Overheads. Fixed costs. Discussion of negotiations to conclude an alliance.
6. Inventories, accounting systems, assessment, and accounting of stocks of the company's divisions. Discussion of negotiations to conclude an alliance.
7. Banking practice. Financial statements. Automated accounting systems. Discussion of negotiations to conclude an alliance.
8. Audit of the company as a check of the correctness of its performance indicators. Discussion of negotiations to conclude an alliance.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>32</td><td>66</td><td>10</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">3</td></tr>
</table>

Assessment (итоговый результат по дисциплине)	Exam			
История и методология науки (History and Methodology of Science)				
Objectives (цель изучения дисциплины):	Formation of students' methodological and scientific culture, a system of knowledge, skills, and abilities in the field of organizing and conducting scientific research; obtaining knowledge of the basics of methodology, methods, and concepts of scientific research; the formation of practical skills and abilities to apply scientific methods; education of moral qualities, instilling ethical norms in the process of carrying out scientific research.			
Content (содержание дисциплины по разделам):	1. The emergence of science. General terms. 2. Scientific knowledge during the Middle Ages and the Renaissance. 3. Arab scientific heritage. 4. Classical science of the 18th-19th centuries. 5. The concept of scientific research. 6. Methods of theoretical and empirical research. 7. The concept of systemic methodology. 8. Communications and their specificity in modern science.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	-	12	87	9
ECTS Credits (количество кредитных единиц из плана):	3			
Assessment (итоговый результат по дисциплине)	Academic assessment			
Цифровые ресурсы в научном исследовании (Digital Resources in Scientific Research)				
Objectives (цель изучения дисциплины):	Acquisition of scientific discussion skills. Acquisition of skills for the formulation of goals, objectives, subject, and object of research within the framework of the student's research work. Description of the research process. Mastering research methods. Modeling the problem.			
Content (содержание дисциплины по разделам):	1. Types and stages of scientific research. 2. Problems for discussion and analysis. 3. Modeling a scientific problem.			
Teaching and learning methods (количество	Lecture	Practical training	Indep. study	Exam

часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	16	24	64	4
ECTS Credits (количество кредитных единиц из плана):	3			
Assessment (итоговый результат по дисциплине)	Academic assessment			
Архитектура предприятия (Enterprise Architecture)				
Objectives (цель изучения дисциплины):	Teaching students the theoretical foundations of modeling and analysis of an enterprise as a complex system of interconnected and interdependent objects, including organizational units, business processes, software and hardware; providing a comprehensive view of future specialists on the industry tasks they are solving in the field of development, implementation and adaptation of modern information technologies; teaching students the basics of project management, reengineering of enterprise architecture and business processes.			
Content (содержание дисциплины по разделам):	1. Basic concepts of Enterprise Architecture. 2. Modeling the business layer of the architecture. 3. Modeling the application layer and the technology layer, development of requirements for IT services. 4. Building a plan for the transition to the target architecture.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	12	26	136	42
ECTS Credits (количество кредитных единиц из плана):	6			
Assessment (итоговый результат по дисциплине)	Exam, course project			
Менеджмент бизнес-процессов (Business Process Management)				
Objectives (цель изучения дисциплины):	Understanding of process orientation as an organizational strategy that promotes the realization of the company's competitive advantages; understanding the scope of process management to improve business efficiency.			

<table>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Place of business processes in enterprise architecture.
2. Business model of the enterprise.
3. Objectives of process modeling.
4. Business process reengineering projects.
5. Quality management system and process management.
6. Process-oriented organizational structure.
7. Process-oriented implementation of information systems.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>12</td><td>24</td><td>72</td><td>36</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">4</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><td colspan="5">Проектный менеджмент (Project Management)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Mastering by students the basics of project management and knowledge of project management standards; teaching students the main aspects of project management, the formation of project documentation.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. The main aspects of project management - business rationale, organization, quality, planning, risk management, change management.
2. The main processes of project management.
3. Principles of project management.
4. Specificity of IT project management and complex architectural projects.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>12</td><td>24</td><td>72</td><td>36</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">4</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
</table>

<table>
<tr><th colspan="5">Управление ИТ-проектами (IT Project Management)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Mastering by students of the basics of project management and knowledge of project management standards, as well as key aspects of managing various project teams; teaching students the main aspects of project management, adaptation to specific tasks, the formation of project documentation, as well as management of the framework and stages of the project; mastering by students the basics of analyzing solutions in the field of ICT and designing target models of enterprise architecture.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. The main aspects of project management - business rationale, organization, quality, planning, risk management, change management.
2. The main processes of project management.
3. Principles of project management.
4. Specificity of IT project management and complex architectural projects.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>12</td><td>24</td><td>72</td><td>36</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">4</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><th colspan="5">Информационная инфраструктура электронных предприятий (Information infrastructure of electronic enterprises)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">The study of the discipline is aimed at mastering systemic principles, developing skills in applying the concept of enterprise architecture in the context of architectural methodologies, for the formation of private architectures of information systems that support a business corresponding to the 6th technological order, taking into account system-wide and industrial requirements; the study of the discipline is aimed at mastering the principles of IT project management, including projects for the implementation and modernization of information systems.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Modern trends in the information society. The essence of digitalization and digital transformation according to the system-cybernetic methodology.
2. Formation of requirements for modern CIS in accordance with basic concepts.</td></tr>
</table>

	3. Evolution of CIS: analysis of development from the establishment of CIS to ERP, ERPII, ERP of the 3rd generation. Classes of tasks supported by modern CIS in the context of digitalization.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	16	32	96	36
ECTS Credits (количество кредитных единиц из плана):	5			
Assessment (итоговый результат по дисциплине)	Exam			
Анализ данных, метрики и измерения в цифровом маркетинге (Data analysis, metrics and measurements in digital marketing)				
Objectives (цель изучения дисциплины):	Gaining knowledge and skills in searching, generalizing and analyzing information about new markets and products; the formation of competencies for assessing the effectiveness of the use, purchase, sale of the company's products; use of modern computing services to analyze data on enterprise products and markets.			
Content (содержание дисциплины по разделам):	1. Basic metrics in digital marketing. 1.1. Conversion and click-through rates. 1.2. Cost and performance indicators. 2. Search and collection of data. 2.1. Web analytics services and counters. 2.2. Monitoring and parsing of sites. 3. Deep analysis of data. 3.1. Data preparation and selection of variables. 3.2. Classification of methods and evaluation of models.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	12	28	71	33
ECTS Credits (количество кредитных единиц из плана):	4			
Assessment (итоговый результат по дисциплине)	Exam, course project			

<table>
<tr><th colspan="5">Медиапланирование, контекстная реклама и поисковая оптимизация (Media planning, contextual advertising and search engine optimization)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">To study the basics of media planning in different means of communication based on the analysis of the composition and structure of audiences of communication media; master the methods of placing advertisements on the Internet: payment for time, for space, for an impression, for a click, for an action; master the capabilities of search engines in media planning; to gain skills in applying methods of Search Engine Optimization (SEO) - search engine optimization - sites on the Internet.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Media planning.
1.1. Basics of media planning.
1.2. Modern aspects of media planning.
1.3. Media planning in a digital environment.
2. Contextual advertising.
2.1. The principles of contextual advertising. Pricing in contextual advertising.
2.2. Planning an advertising campaign for contextual advertising.
2.3. Composing advertisements for contextual advertising.
2.4. Analysis of the effectiveness of the advertising campaign.
3. Search engine optimization.
3.1. How search engines and SEO work.
3.2. Text optimization.
3.3. Technical audit of the site.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>12</td><td>24</td><td>72</td><td>36</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">4</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><th colspan="5">Маркетинг в социальных медиа и CRM системы (Social media marketing and CRM systems)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Explore the directions of communication with users and suppliers and marketing tools in social networks; to study the directions and tools of systems for managing relationships with users and suppliers, taking into account interaction with</td></tr>
</table>

<table>
<tr><td></td><td colspan="4">them through social networks.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Social media marketing.
1.1. The essence, concept, classification of social networks and the possibility of their use in marketing.
1.2. SMM (Social Media Marketing) - social media marketing.
2. CRM systems.
2.1. Classic functioning of CRM systems.
2.2. Social CRM.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>16</td><td>32</td><td>60</td><td>36</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">4</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><td colspan="5">Разработка мобильных приложений, сайтов интернет-магазинов и продающих страниц (Development of mobile applications, websites of online stores and selling pages)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Gaining theoretical knowledge about modern technologies for the development of mobile applications, online store sites and selling pages. Development of practical skills in the development of mobile applications, e-commerce sites and selling pages. Developing practical skills in building the architecture of mobile applications, online store sites and selling pages. Developing practical skills in testing mobile applications, online store sites and selling pages. Developing practical skills in project management for the development of mobile applications, online store sites and selling pages. Development of practical skills in the development of technical specifications for the development of mobile applications, online store sites and selling pages.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Basic course in the development of mobile applications and web pages.
1.1. Basic concepts of modern technologies for developing mobile applications and web pages.
1.2. HTML markup language and CSS document appearance description language.
1.3. Content management system CMS and principles of building sites for online stores and selling pages.
1.4. Mobile application development technologies.</td></tr>
</table>

	2. Development of technical specifications. 3. Development of the architecture of mobile applications, e-commerce sites and selling pages. 4. Development of a mobile application, a website for an online store or a selling page using all the studied technologies based on the terms of reference. 5. Advanced course in mobile application development. 5.1. Basics of JavaScript, Query and Node.JS. 5.2. Fundamentals of the PHP language.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	16	36	25	31
ECTS Credits (количество кредитных единиц из плана):	3			
Assessment (итоговый результат по дисциплине)	Exam, course work			
Управление инновациями (Innovation management)				
Objectives (цель изучения дисциплины):	Study of the theoretical foundations of innovation management; acquaintance with modern approaches to innovation management; working out the ability to use theoretical approaches and best practices in the formation of the company's innovative strategy.			
Content (содержание дисциплины по разделам):	1. Theoretical foundations of innovation. 2. Intellectual property and its protection. 3. Innovation projects as a form of implementation of innovative activity. 4. Strategic management of innovation.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	16	32	24	36
ECTS Credits (количество кредитных единиц из плана):	3			
Assessment (итоговый результат по дисциплине)	Exam			

<table>
<tr><th colspan="5">Моделирование социально-экономических процессов (Modeling socio-economic processes)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Formation of systemic knowledge about the use of mathematical models in solving social and economic problems; gaining knowledge in the field of mathematical modeling in relation to economic applications; study of typical mathematical methods for solving applied economic problems.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. The role of mathematical modeling in science and practice of management.
2. General provisions of economic and mathematical modeling.
3. Applied aspects of mathematical modeling.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>16</td><td>32</td><td>15</td><td>9</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">2</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Academic assessment</td></tr>
<tr><th colspan="5">Оформление и представление результатов исследований (Registration and presentation of research results)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Preparation of masters for the correct presentation, design and presentation of the results of scientific research in accordance with the requirements of GOST, regulations of the university, institute and higher school</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Types, structure, methods of registration and presentation of the results of scientific research
1.1. Forms of scientific results presentation
1.2. Fundamentals of the design and presentation of the scientific research results
2. Registration and presentation of the final qualifying work
2.1. Registration of the final qualifying work
2.2. Presentation of the final qualifying work</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>16</td><td>47</td><td>9</td></tr>
</table>

<table>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">2</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Academic assessment</td></tr>
<tr><td colspan="5">Брендинг и рекламный дизайн (Branding and advertising design)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Familiarization of students with the basics of brand identity; development of skills in the development of logos and other means of identification, taking into account the peculiarities of brand identification and advertising design in the digital environment.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Branding and brand management.
1.1. Theoretical foundations of branding.
1.2. Brand identification elements.
2. Advertising design.
2.1. Principles of advertising design and copywriting.
2.2. Advertising production. Advertising products in the digital environment.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>12</td><td>24</td><td>90</td><td>54</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">5</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><td colspan="5">Компьютерный дизайн (Computer design)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Familiarization of students with the basics of brand identity; study packages of applied computer programs for advertising design; to develop skills in the development of logos and other means of identification, in the development of printed advertising products, in the development of video products, taking into account the peculiarities of brand identification and advertising design in the digital environment.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Branding
1.1. Theoretical foundations of branding
1.2. Brand identity elements
2. Computer design
2.1. Design and copywriting principles
2.2. Advertising production.
Advertising products in the digital environment</td></tr>
</table>

<table>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>12</td><td>24</td><td>90</td><td>54</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">5</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><td colspan="5">Карьерная адаптивность (Career adaptability)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Expanding the area of subject knowledge of the master's student to build up the scope of professional activity.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Building a careerogram.
2. Career management in the organization.
3. Self-diagnosis of personality and self-coaching.
4. Preparation and submission of a reflective essay.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>2</td><td>17</td><td>152</td><td>9</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">5</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Academic assessment</td></tr>
<tr><td colspan="5">Образовательный форсайт (Educational foresight)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Formation of an idea of the practice of using online learning in the modern educational process, the use of educational analytics to assess the progress of one's own educational process, the disclosure of modern methods of constructing an educational trajectory to empower students.
Study of the specific use of online courses in the educational process.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Basic concepts and definitions of e-learning and online learning
2. Acquaintance with online resources hosted on open educational platforms. Acquaintance with foreign educational platforms.</td></tr>
</table>

<table>
<tr><td></td><td colspan="4">3. Independent study of an online resource. Mandatory study of a resource posted on a foreign platform.
4. Passing intermediate tests of an online resource to demonstrate the progress of learning the material
5. Work on the forum of an online resource</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>2</td><td>17</td><td>152</td><td>9</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">5</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Academic assessment</td></tr>
<tr><td colspan="5">Практика по получению профессиональных умений и опыта профессиональной деятельности (в том числе технологическая практика) (Practice for obtaining professional skills and professional experience (including technological practice))</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Gaining practical experience, including independent activity at the enterprise (in the company) and competencies in the areas of professional activity.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Development of an individual task in accordance with the goals and objectives of the practice.
2. Organizational meeting to clarify the goals, objectives, content and order of internship.
3. Acquaintance with the place of the practice.
4. Collection and processing of regulatory, industrial and technological information.
5. Implementation of an individual assignment.
6. Drawing up and execution of the practice report.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>-</td><td>432</td><td>-</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">12</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
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<table>
<tr><th colspan="5">Преддипломная практика (Undergraduate practice)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Gaining practical experience, including independent activity at the enterprise (in the company) and competencies in the areas of professional activity.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Development of an individual task in accordance with the goals and objectives of the practice.
2. Organizational meeting to clarify the goals, objectives, content and order of internship.
3. Acquaintance with the place of the practice.
4. Collection and processing of regulatory, industrial and technological information.
5. Implementation of an individual assignment. The results of the individual assignment.
6. Drawing up and execution of the practice report.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>-</td><td>324</td><td>-</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">9</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><th colspan="5">Исследовательская работа по менеджменту бизнес-процессов (Research work in Business Process Management)</th></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Deepening the knowledge gained in the process of theoretical training and acquiring the necessary professional skills and abilities in accordance with the chosen direction of training.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Development of an individual task in accordance with the goals and objectives of the practice.
2. Organizational meeting to clarify the goals, objectives, content and order of internship.
3. Acquaintance with the place of the practice.
4. Collection and processing of regulatory, industrial and technological information.
5. Implementation of an individual assignment.
6. Drawing up and execution of the practice report.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>-</td><td>228</td><td>24</td></tr>
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ECTS Credits (количество кредитных единиц из плана):	7			
Assessment (итоговый результат по дисциплине)	Exam			
Исследовательская работа по технологиям бизнес-анализа (Research work on Business Analysis Technologies)				
Objectives (цель изучения дисциплины):	Deepening the knowledge gained in the process of theoretical training and acquiring the necessary professional skills and abilities in accordance with the chosen direction of training.			
Content (содержание дисциплины по разделам):	1. Development of an individual task in accordance with the goals and objectives of the practice. 2. Organizational meeting to clarify the goals, objectives, content and order of internship. 3. Acquaintance with the place of the practice. 4. Collection and processing of regulatory, industrial and technological information. 5. Implementation of an individual assignment. 6. Drawing up and execution of the practice report.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	-	-	192	24
ECTS Credits (количество кредитных единиц из плана):	6			
Assessment (итоговый результат по дисциплине)	Exam			
Исследовательская работа по архитектуре электронного бизнеса (Research work on e-business Architecture)				
Objectives (цель изучения дисциплины):	Deepening the knowledge gained in the process of theoretical training and acquiring the necessary professional skills and abilities in accordance with the chosen direction of training.			
Content (содержание дисциплины по разделам):	1. Development of an individual task in accordance with the goals and objectives of the practice. 2. Organizational meeting to clarify the goals, objectives, content and order of internship. 3. Acquaintance with the place of the practice. 4. Collection and processing of regulatory, industrial and technological information. 5. Implementation of an individual assignment. 6. Drawing up and execution of the practice report.			

<table>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>-</td><td>160</td><td>20</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">5</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><td colspan="5">Исследовательская работа по проектному менеджменту (Research work on Project Management)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Deepening the knowledge gained in the process of theoretical training and acquiring the necessary professional skills and abilities in accordance with the chosen direction of training.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Development of an individual task in accordance with the goals and objectives of the practice.
2. Organizational meeting to clarify the goals, objectives, content and order of internship.
3. Acquaintance with the place of the practice.
4. Collection and processing of regulatory, industrial and technological information.
5. Implementation of an individual assignment.
6. Drawing up and execution of the practice report.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>-</td><td>192</td><td>24</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">6</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><td colspan="5">Научно-исследовательская работа (Research work)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Gaining practical experience, including independent activity at the enterprise (in the company) and competencies in the areas of professional activity.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">1. Development of an individual task in accordance with the goals and objectives of the practice.
2. Organizational meeting to clarify the goals, objectives, content and order of internship.</td></tr>
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<table>
<tr><td></td><td colspan="4">3. Acquaintance with the place of the practice.
4. Collection and processing of regulatory, industrial and technological information.
5. Implementation of an individual assignment.
6. Drawing up and execution of the practice report.</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>-</td><td>216</td><td>-</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">6</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">Exam</td></tr>
<tr><td colspan="5">Защита выпускной квалификационной работы, включая подготовку к защите и процедуру защиты (Defense of the final qualifying work, including preparation for defense and defense procedure)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Establishing the level of preparedness of a graduate of a higher educational institution to perform professional tasks and the compliance of his training with the requirements of the independently established educational standards and the main educational program in the direction of training (specialty) of higher education.</td></tr>
<tr><td>Content (содержание дисциплины по разделам):</td><td colspan="4">-</td></tr>
<tr><td rowspan="2">Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):</td><td>Lecture</td><td>Practical training</td><td>Indep. study</td><td>Exam</td></tr>
<tr><td>-</td><td>-</td><td>216</td><td>-</td></tr>
<tr><td>ECTS Credits (количество кредитных единиц из плана):</td><td colspan="4">6</td></tr>
<tr><td>Assessment (итоговый результат по дисциплине)</td><td colspan="4">-</td></tr>
<tr><td colspan="5">Семинар по бизнес-инжинирингу (Business Engineering Seminar)</td></tr>
<tr><td>Objectives (цель изучения дисциплины):</td><td colspan="4">Formation of an idea about the possibilities of the received specialty, the structure of the educational program. Formation of understanding of business and enterprise as a</td></tr>
</table>

	system of heterogeneous elements.			
Content (содержание дисциплины по разделам):	1. Business engineering as an approach to the creation and management of enterprises. 2. Current trends in business management.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	13	-	50	9
ECTS Credits (количество кредитных единиц из плана):	2			
Assessment (итоговый результат по дисциплине)	Academic assessment			
Основы работы в ЭИОС (Basics of work in EIEE)				
Objectives (цель изучения дисциплины):	Formation of students' ability to organize the educational process with elements of e-learning, which allows to ensure the functioning of the electronic information and educational environment			
Content (содержание дисциплины по разделам):	1. Components and factors of the information and educational environment formation. 2. Information and educational space. 3. Man in the information and educational environmen			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	2	4	26	4
ECTS Credits (количество кредитных единиц из плана):	1			
Assessment (итоговый результат по дисциплине)	Academic assessment			
Эконометрический анализ данных (Econometric Data Analysis)				
Objectives (цель изучения дисциплины):	Acquaintance of students with modern econometric methods and their field of application for solving applied problems of quantitative data analysis.			
Content (содержание дисциплины по разделам):	1. Missing data and their types. 2. Models of discrete choice. 3. Regression analysis. 4. Descriptive data analysis. Correlation analysis.			

	5. Time series. 6. Factor analysis. 7. Cluster analysis.			
Teaching and learning methods (количество часов: на лекции, практические занятия или лабораторные работы, самостоятельную работу студента):	Lecture	Practical training	Indep. study	Exam
	16	16	40	36
ECTS Credits (количество кредитных единиц из плана):	3			
Assessment (итоговый результат по дисциплине)	Exam			