**Санкт-Петербургский филиал федерального государственного   
автономного образовательного учреждения высшего образования   
"Национальный исследовательский университет**

**"Высшая школа экономики"**

Факультет Санкт-петербургская школа экономики и менеджмента

Департамент менеджмента

**Рабочая программа дисциплины**  
Эмпирические методы и их применение в экономике и менеджменте

(Empirical Methods and Applications in Economics and Management)

для направления 38.06.01 «Экономика»

подготовки научно-педагогических кадров в аспирантуре,

образовательная программа «Менеджмент», «Экономика»

Разработчик(и) программы:

Александрова Е. А., к. э. н., доцент, ea.aleksandrova@hse.ru

Шакина Е. А., к.э.н., PhD, доцент, eshakina@hse.ru

Санкт-Петербург, 2019

*Настоящая программа не может быть использована другими подразделениями университета и другими вузами без разрешения кафедры-разработчика программы.*

**Аннотация**

|  |  |  |  |
| --- | --- | --- | --- |
| Название дисциплины | Эмпирические методы и их применение в экономике и менеджменте | | |
| Образовательная программа | Экономика, Менеджмент | | |
| Тип дисциплины[[1]](#footnote-1) | Обязательный | | |
| Требования к уровню знаний студентов, необходимых для освоения дисциплины (пререквизиты) | Статистика, Высшая математика, Основы экономики | | |
| Объем з.е. | 3 | | |
| Объем в часах | Аудиторная работа | Самостоятельная работа | Всего |
| 36 | 78 | 114 |
| Краткое описание курса | Курс знакомит студентов с источниками данных и аналитическими методами работы с данными, которые широко используются в менеджериальных и бизнес-исследованиях. Основная часть курса посвящена обзору соответствующих источников данных, индикаторов и статистических показателей, основных и передовых методик анализа данных в эконометрике. Практический подход к обучению основан на профессиональных инструментах сбора и обработки данных и их анализа – Stata и R. | | |
| Образовательные результаты по дисциплине | По результатам курса студенты будут;  Знать основные источники данных, их преимущества и недостатки;  Понимать значение основных статистических показателей;  Уметь выявлять источники сбора эмпирического материала в социальных науках;  Уметь выполнять описательный анализ в STATA и R | | |
| Краткое содержание дисциплины | Introduction into principles of collecting and using business data  Probability and statistics in advanced data analysis  Data visualization and reporting | | |
| Образовательные технологии | Лекции, дискуссии, семинары, кейсы | | |
| Формы контроля | Итоговая оценка=0.3\* Тест 1+0.3\*Тест 2+0.4\*Экзамен  Тест 1 и 2: студентам необходимо дать развернутый ответ на предложенные вопросы о моделях и теориях анализа данных.  Экзамен: студентам необходимо дать развернутый ответ на предложенные вопросы о моделях и теориях анализа данных. | | |
| Литература | Основная  Tong, Hengqing, et al. Developing Econometrics, John Wiley & Sons, Incorporated, 2011.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=822574>.  Дополнительная  Lancaster, Geoff. Research Methods in Management : A Concise Introduction to Research in Management and Business Consultancy, Routledge, 2004. ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=297137>.  Neugeboren, Robert H.. The Student's Guide to Writing Economics, Routledge, 2005.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=214853>. | | |
| Преподаватель | Александрова Е. А., к. э. н., доцент, ea.aleksandrova@hse.ru  Шакина Е. А., к.э.н., PhD, доцент, eshakina@hse.ru | | |

**Course Syllabus**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Title of the course | |  | | | | | | |
| Title of the Academic Programme | | Economics, Management | | | | | | |
| Type of the course | | Mandatory | | | | | | |
| Prerequisites | | Calculus, Statistics, Principles of Economics | | | | | | |
| ECTS workload | | 3 | | | | | | |
| Total indicative study hours | | Directed Study | | Self-directed study | | | Total | |
| 36 | | 78 | | | 114 | |
| Course Overview | | This course introduces students to sources and analytical techniques of data commonly used in management and business studies. A conceptual part of the course is dedicated to the overview of appropriate data sources, indicators and statistical metrics, basic and advanced techniques for data analysis and econometrics Practical approach to learning is based on professional tools for data collection and processing and analysis – Stata and R. | | | | | | |
| Intended Learning Outcomes (ILO) | | As a result of successful learning students are: 1. to have knowledge of commonly used data sources, their benefits and limitations 2. to understand the meaning of various statistical indicators in principle fields of social science 3. be able to identify suitable statistical sources for a defined research problem 4. be able to run descriptive analysis using Stata and R | | | | | | |
| Teaching and Learning Methods | | Teaching methods: lectures, problem-solving discussions, workshops, case-studies. | | | | | | |
| Content and Structure of the Course | | | | | | | | |
| **№** | **Topic / Course Chapter** | | **Total** | | **Directed Study** | | | **Self-directed Study** |
| **Lectures** | **Tutorials** | |
| 1 | Introduction into principles of collecting and using business data | | 36 | | 2 | 8 | | 26 |
| 2 | Probability and statistics in advanced data analysis | | 39 | | 4 | 9 | | 26 |
| 3 | Data visualization and reporting | | 39 | | 4 | 9 | | 26 |
| **Total study hours** | | | 114 | | 10 | 26 | | 78 |
| Indicative Assessment Methods and Strategy | | Final grade=0.3\* Test 1+0.3\*Test 2+0.4\*Exam  **List of possible assignments:**  Test 1 and test 2: students have to find solutions for the list of exercises. Exercise might be about examining different properties of theories or models, writing short and critical paragraphs about theories or models.  Exam: students have to find solutions for the list of exercises. Exercise might be about examining different properties of theories or models, writing short and critical paragraphs about theories or models. | | | | | | |
| Readings / Indicative Learning Resources | | Mandatory  Tong, Hengqing, et al. Developing Econometrics, John Wiley & Sons, Incorporated, 2011.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=822574>.  Optional  Lancaster, Geoff. Research Methods in Management : A Concise Introduction to Research in Management and Business Consultancy, Routledge, 2004. ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=297137>.  Neugeboren, Robert H.. The Student's Guide to Writing Economics, Routledge, 2005.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=214853>. | | | | | | |
| Indicative Self- Study Strategies | | **Type** | | | | **+/–** | | **Hours** |
| Reading for seminars / tutorials (lecture materials, mandatory and optional resources) | | | | + | | 35 |
| Assignments for seminars / tutorials / labs | | | | + | | 35 |
| Preparation for the exam | | | | + | | 8 |
| Academic Support for the Course | | Academic support for the course is provided via LMS, where students can find: guidelines and recommendations for doing the course; guidelines and recommendations for self-study; samples of assessment materials | | | | | | |
| Facilities, Equipment and Software | | (If required) | | | | | | |
| Course Instructor | | Ekaterina Aleksandrova, PhD, Associate Professor, ea.aleksandrova@hse.ru  Elena Shakina, PhD, Associate Professor, eshakina@hse.ru | | | | | | |

**Intended Learning Outcomes (ILO) Delivering**

|  |  |  |  |
| --- | --- | --- | --- |
| **Programme ILO(s)** | **Course**  **ILO(s)** | **Teaching and Learning Methods for delivering ILO(s)** | **Indicative Assessment Methods of Delivered ILO(s)** |
| be able to select and apply relevant for study research methods | to have knowledge of commonly used data sources, their benefits and limitations | Seminars, Lectures | Tests, Exam |
| be able to set purposes and tasks of a research project on fundamental and applied research | to understand the meaning of various statistical indicators in principle fields of social science | Seminars, Lectures | Tests, Exam |
| be able to set purposes and tasks of a research project on fundamental and applied research | be able to identify suitable statistical sources for a defined research problem | Seminars, Lectures | Tests, Exam |
| be able to solve research problems using the updated national and international experience and modern ICT | be able to run descriptive analysis using Stata and R | Seminars, Lectures | Tests, Exam |

**Course Content**

1. Introduction into principles of collecting and using business dataTotal-36 Lecture-2 Seminar-8 Home Assignments-26

Research in business.Ethics in business research.Research questions and associated techniques.Screening data prior to analysis.Normality, linearity, and homoscedasticity.Data transformations.

Tong, Hengqing, et al. Developing Econometrics, John Wiley & Sons, Incorporated, 2011.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=822574>.

Lancaster, Geoff. Research Methods in Management : A Concise Introduction to Research in Management and Business Consultancy, Routledge, 2004. ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=297137>.

Neugeboren, Robert H.. The Student's Guide to Writing Economics, Routledge, 2005.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=214853>.

1. Probability and statistics in advanced data analysisTotal-39 Lecture-4 Seminar-9 Home Assignments-26

Exploratory data analysis.Data and sampling distributions.Statistical experiments and significance testing.Experimental and quasi-experimental techniques.Regression and prediction.Correlation vscausation.Endogeneity. Guide to entering, editing, saving, and retrieving large quantities of data using Stata.

Tong, Hengqing, et al. Developing Econometrics, John Wiley & Sons, Incorporated, 2011.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=822574>.

Lancaster, Geoff. Research Methods in Management : A Concise Introduction to Research in Management and Business Consultancy, Routledge, 2004. ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=297137>.

Neugeboren, Robert H.. The Student's Guide to Writing Economics, Routledge, 2005.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=214853>.

1. Data visualization and reportingTotal-39 Lecture-4 Seminar-9 Home Assignments-26

Presenting insights and findings. Written report: research report components, writings, presentation of statistics. Oral presentation: planning, organizing, supporting, visualizing, delivering.

Tong, Hengqing, et al. Developing Econometrics, John Wiley & Sons, Incorporated, 2011.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=822574>.

Lancaster, Geoff. Research Methods in Management : A Concise Introduction to Research in Management and Business Consultancy, Routledge, 2004. ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=297137>.

Neugeboren, Robert H.. The Student's Guide to Writing Economics, Routledge, 2005.ProQuestEbook Central, <https://ebookcentral.proquest.com/lib/hselibrary-ebooks/detail.action?docID=214853>.

**Assessment Methodsand Criteria**

**Assessment Methods**

|  |  |  |  |
| --- | --- | --- | --- |
| **Types of Assessment** | **Forms of Assessment** | **Modules** | |
| **1** | **2** |
| Formative Assessment | Tests | \* | \* |
| Summative Assessment | Exam |  | \* |

**AssessmentCriteria**

**In-class Participation**

|  |  |
| --- | --- |
| **Grades** | **Assessment Criteria** |
| «Excellent»(8-10) | A critical analysis which demonstrates original thinking and shows strong evidence of preparatory research and broad background knowledge. |
| «Good»(6-7) | Shows strong evidence of preparatory research and broad background knowledge. Excellent oral expression. |
| «Satisfactory»(4-5) | Satisfactory overall, showing a fair knowledge of the topic, a reasonable standard of expression. Some hesitation in answering follow-up questions and/or gives incomplete or partly irrelevant answers. |
| «Fail»(0-2) | Limited evidence of relevant knowledge and an attempt to address the topic.  Unable to offer relevant information or opinion in answer to follow-up questions. |

**Project Work**

|  |  |
| --- | --- |
| **Grades** | **Assessment Criteria** |
| «Excellent»(8-10) | A well-structured, analytical presentation of project work. Shows strong evidence and broad background knowledge. In a group presentation all members contribute equally and each contribution builds on the previous one clearly; Answers to follow-up questions reveal a good range and depth of knowledge beyond that covered in the presentation and show confidence in discussion. |
| «Good»(6-7) | Clearly organized analysis, showing evidence of a good overall knowledge of the topic. The presenter of the project work highlights key points and responds to follow up questions appropriately. In group presentations there is evidence that the group has met to discuss the topic and is presenting the results of that discussion, in an order previously agreed. |
| «Satisfactory»(4-5) | Takes a very basic approach to the topic, using broadly appropriate material but lacking focus. The presentation of project work is largely unstructured, and some points are irrelevant to the topic. Knowledge of the topic is limited and there may be evidence of basic misunderstanding. In a group presentation, most of the work is done by one or two students and the individual contributions do not add up. |
| «Fail»(0-2) | Fails to demonstrate any appropriate knowledge. |

**Written Assignments (Essay, Test/Quiz, Written Exam, etc.)**

|  |  |
| --- | --- |
| **Grades** | **Assessment Criteria** |
| «Excellent»(8-10) | Has a clear argument, which addresses the topic and responds effectively to all aspects of the task. Fully satisfies all the requirements of the task; rare minor errors occur; |
| «Good»(6-7) | Responds to most aspects of the topic with a clear, explicit argument. Covers the requirements of the task; may produce occasional errors. |
| «Satisfactory»(4-5) | Generally addresses the task; the format may be inappropriate in places; display little evidence of (depending on the assignment): independent thought and critical judgement include a partial superficial coverage of the key issues, lack critical analysis, may make frequent errors. |
| «Fail»(0-2) | Fails to demonstrate any appropriate knowledge. |

**Recommendations for students about organization of self-study**

Self-study is organized in order to:

* Systemize theoretical knowledge received at lectures;
* Extendingtheoreticalknowledge;
* Learn how to use legal, regulatory, referential information and professional literature;
* Development of cognitive and soft skills: creativity and self-sufficiency;
* Enhancing critical thinking and personal development skills;
* Developmentofresearchskills;
* Obtaining skills of efficient independent professional activities.

Self-study, which is not included into a course syllabus, but aimed at extending knowledge about the subject, is up to the student’s own initiative. A teacher recommends relevant resources for self-study, defines relevant methods for self-study and demonstrates students’ past experiences.  Tasks for self-study and its content can vary depending on individual characteristics of a student. Self-study can be arranged individually or in groups both offline and online depending on the objectives, topics and difficulty degree. Assessment of self-study is made in the framework of teaching load for seminars or tests.

In order to show the outcomes of self-study it is recommended:

* Make a plan for 3-5 presentation which will include topic, how the self-study was organized, main conclusions and suggestions and its rationale and importance.
* Supply the presentation with illustrations. It should be defined by an actual task of the teacher.

**Recommendations for essay**

An essay is a written self-study on a topic offered by the teacher or by the student him/herself approved by teacher. The topic for essay includes development of skills for critical thinking and written argumentation of ideas. An essay should include clear statement of a research problem; include an analysis of the problem by using concepts and analytical tools within the subject that generalize the point of view of the author.

Essay structure:

1. *Introduction and formulation of a research question.*

2.*Body of the essay* and theoretical foundation of selected problem and argumentation of a research question.

3. *Conclusion* and argumentative summary about the research question and possibilities for further use or development.

**Special conditions for organization of learning process for students with special needs**

The following types of comprehension of learning information (including e-learning and distance learning) can be offered to students with disabilities (by their written request) in accordance with their individual psychophysical characteristics:

1. *for persons with vision disorders:* a printed text in enlarged font; an electronic document; audios (transferring of learning materials into the audio); an individual advising with an assistance of a sign language interpreter; individual assignments and advising.
2. *for persons with hearing disorders: a* printed text; an electronic document; video materials with subtitles; an individual advising with an assistance of a sign language interpreter; individual assignments and advising.
3. *for persons with muscle-skeleton disorders: a* printed text; an electronic document; audios; individual assignments and advising.

1. ***Notes:***

   Обязательный/повыбору [↑](#footnote-ref-1)