

*Federal State Autonomous Educational establishment of higher education
RUDN-University*

Engineering Academy

Recommended by ICSS

PROGRAMME STRUCTURE AND SYLLABUS

Name of the course: Research Seminar

Recommended for the program track: 09.06.01 Informatics and computer engineering

Educational program specialization: Management in social and economic systems (engineering science):
strategic management

1. Course objectives and learning outcomes:

Aim: provide training for postgraduate students in development of professional research skills, improvement competencies in methodology and technology of research activities as it is the most important competence of a modern scientist.

Learning outcomes:

- 1) To form the basis of the scientific thinking of graduate students, the ability to comprehend the course and results of research in accordance with the methodological laws and realities of a specific educational process;
- 2) To discuss specific parts of dissertation research; set relevant tasks derived from dissertation topic, and find solutions to overcome them in team work,
- 3) To develop skills of scientific discussion, presentation and approbation of various parts of the dissertation research; preparation for the timely defense of dissertations presentation and research results.

2. Place of the course in the structure of General Education Programme

The discipline belongs to the variable part of Block 1 of the curriculum. Table 1 shows the previous and subsequent components of the educational program aimed at the formation of competencies in accordance with the competence matrix of Education Programme of High Education Competence-based education.

Table No. 1

Preceding and subsequent courses, directed to the competences forming

№ п/п	Competence and its code	Preceding courses	Following courses
Universal competencies			
1	UC-3 UC-4	Methodology of scientific research	Scientific research (preparation of a scientific qualification work (dissertation) for the degree of Candidate of Sciences (Ph.D.)
General professional competencies			
2	GPC-5 GPC-7	Methodology of scientific research	Management in social and economic systems Scientific research (preparation of a scientific qualification work (dissertation) for the degree of Candidate of Sciences (Ph.D.)
Professional competencies			
3	PC-3 PC-4	Methodology of scientific research	Management in social and economic systems Modeling of social and economic systems Scientific research (preparation of a scientific qualification work (dissertation) for the degree of Candidate of Sciences (Ph.D.)

3. Requirements to the outcome of the course:

The learning outcomes of the course are special knowledge, abilities, relevant skills and experience, which will ensure the achievement of the planned results of mastering the educational program and will characterize the stages of the formation of the following competence:

–ready to participate in the work of Russian and international research teams to solve scientific and scientific and educational problems (UK-3);

–ready to use modern methods and technologies of scientific communication in the state and foreign languages (UK-4);

–able to evaluate objectively the results of research and development carried out by other specialists and in other scientific institutions (GPC-5);

–know the methods of conducting patent research, licensing and copyright protection when creating innovative products in the field of professional activity (GPC-7);

–ready for independent (including managerial) research activities that require extensive fundamental training in modern areas of branch science, deep specialized training in the chosen direction, possession of skills of modern research methods (PC-3);

–get fundamental knowledge in the main sections of computer science and computer technology, including the theoretical foundations of computer science, mathematical modeling, numerical methods and software packages, system analysis, information management and processing, elements and devices of computer technology and control systems, management in social and economic systems, use information retrieval systems, use experimental research techniques (PC-4).

4. Workload of the course and forms of study work

General workload of the course is 4 credit units (144 academic hours).

academic hours

Form of study work	Total hours								
	Semester								Total
	1	2	3	4	5	6	7	8	
Class hours (total)	-	-	40	-	-	-	-	-	40
Including:									
Lectures	-	-	20	-	-	-	-	-	20
Practical classes (PC)	-	-	20	-	-	-	-	-	20
Self-study	-	-	104	-	-	-	-	-	104
Assessment	-	-	-	-	-	-	-	-	-
Total hours:	-	-	144	-	-	-	-	-	144
credits:	-	-	4	-	-	-	-	-	4

5. Content of the course

5.1. Course Units

№ п/п	Name of the course part	Subject matter of the part
1	Determination of the subject of sociological and economic research	Justification of the choice and approval of the research topic
2	Methodological principles of studying actual social problems	Development of the structure of scientific work (dissertation) and drawing up an individual plan for scientific/ research work
3	Specifics of data analysis and generalization	Study of specific social and economic processes, groups and institutions
	Basics of research planning	Formulation of the problem of research (research question)
5	Revision of the research program in the perspective of the empirical part of the study	Clarification of the problem of research (research question), etc. Work on the implementation of the theoretical part of the study: collection and processing of scientific, statistical information on the topic
6	Discussion of specific models and options for building a sample	Type, theoretical and practical justifications, principles and procedures of calculation, principles and procedures of selection; detailed sampling plan, linked to target groups and/or sources of information
7	Modeling of methods and directions in the formulation of conclusions and recommendations	Preparation of the manuscript of a scientific work (dissertation): the layout of the prepared materials, their reduction into chapters of the work; compilation of a list of literary sources and making references to them in the text
8	Possible options for processing primary information	Discussion of the range of sources for secondary data. Features of the design of the abstract of scientific work (dissertation)
9	Subject matter of the part	Preparation of a graphical presentation of the results of the study. The main factors of perception of the presentation and oral presentation

5.2 Course Units and Academic Activities

academic hours

№ п/п	Subject matter of the part	Lectures	Seminars	Self-study	Total workload, hours
1	Determination of the subject of sociological and economic research	2	2	10	14
2	Methodological principles of studying actual social problems	2	2	10	14
3	Specifics of data analysis and generalization	2	2	10	14
4	Basics of research planning	4	4	20	28

5	Revision of the research program in the perspective of the empirical part of the study	2	2	10	14
6	Discussion of specific models and options for building a sample	2	2	10	14
7	Modeling of methods and directions in the formulation of conclusions and recommendations	2	2	10	14
8	Possible options for processing primary information	2	2	12	16
9	Subject matter of the part	2	2	12	16
Total:		20	20	104	144

6. Seminars/practical classes

№ п/п	Course unit	Topics and issues for discussion	Total workload, hours
1	1	Justification of the choice and approval of the research topic	2
2	2	Development of the structure of scientific work (dissertation) and drawing up an individual plan for scientific/ research work	2
3	3	Study of specific social and economic processes, groups and institutions	2
4	4	Formulation of the problem of research (research question)	4
5	5	Clarification of the problem of research (research question), etc. Work on the implementation of the theoretical part of the study: collection and processing of scientific, statistical information on the topic	2
6	6	Type, theoretical and practical justifications, principles and procedures of calculation, principles and procedures of selection; detailed sampling plan, linked to target groups and/or sources of information	2
7	7	Preparation of the manuscript of a scientific work (dissertation): the layout of the prepared materials, their reduction into chapters of the work; compilation of a list of literary sources and making references to them in the text	2
8	8	Discussion of the range of sources for secondary data. Features of the design of the abstract of scientific work (dissertation)	2
9	9	Preparation of a graphical presentation of the results of the study. The main factors of perception of the presentation and oral presentation	2

7. Technical Support Requirements

Classrooms with technical support	Address
Classroom for lectures, seminars and midterm assessments № 493 Projector Epson EH-TW5300 (LCD, 1080p 1920 x 1080, 2200Lm, 35000:1, 2 x HDMI, MHL Screen Draper Baronet NTSC (3:4) 244/96(8) 152*203 MW Set of specialized furniture	Moscow, Ordzhonikidze str., 3
Education and methodology Classroom for self-study № 345 Equipment and furniture: - personal computers with access to the Internet; - desks, chairs	Moscow, Ordzhonikidze str., 3

8. Study-methodical and information sources:

Databases, reference systems and search engines:

- Electronic library system(ELS) РУДН and third-party ELS :
 - ELS RUDN <http://lib.rudn.ru/MegaPro/Web>
 - ELS «University Library Online» <http://www.biblioclub.ru>
 - ELS Юрайт <http://www.biblio-online.ru>
 - ELS «Student's consultant» www.studentlibrary.ru
 - ELS «ЛАНЬ» <http://e.lanbook.com/>
- Websites of ministries, departments, services, production enterprises and companies whose activities are specialized for the course:
 - <http://economy.gov.ru/minec/main/>- website of the Ministry of Economic Development of the Russian Federation
- Databases and search engines:
 - electronic fund of legal and normative-technical documentation <http://docs.cntd.ru/>

- Yandex search engine <https://www.yandex.ru/>
- search engine Google <https://www.google.ru/>
- abstract database SCOPUS <http://www.elsevierscience.ru/products/scopus/>

9. Educational methodology resources

Basic literature:

1. Шкляр, М.Ф. Основы научных исследований: учебное пособие / М.Ф. Шкляр. - 6-е изд. - Москва: Издательско-торговая корпорация «Дашков и К°», 2014. - 208 с. - (Учебные издания для бакалавров). - Библиогр.: с. 195-196 - ISBN 978-5-394-02518-1; То же [Электронный ресурс]. - URL: <http://biblioclub.ru/index.php?page=book&id=450782>
2. Тимербаев, Н.Ф. Основы научных исследований: учебное пособие / Н.Ф. Тимербаев, Р.Г. Сафин; Федеральное агентство по образованию, Государственное образовательное учреждение Высшего профессионального образования Казанский государственный технологический университет. - Казань: Издательство КНИТУ, 2008. - 82 с.: ил., табл., схем. - Библиогр. в кн. - ISBN 978-5-7882-0538-0; То же [Электронный ресурс]. - URL: <http://biblioclub.ru/index.php?page=book&id=259063>
3. Бушенева, Ю.И. Как правильно написать реферат, курсовую и дипломную работы / Ю.И. Бушенева. - Москва: Издательско-торговая корпорация «Дашков и К°», 2014. - 140 с.: ил. - (Учебные издания для бакалавров). - Библиогр.: с. 112-114 - ISBN 978-5-394-02185-5; То же [Электронный ресурс]. - URL: <http://biblioclub.ru/index.php?page=book&id=453258>
4. Экономика: язык и речь научного текста: учебное пособие / Н.К. Ерилова, О.А. Чечина, Е.А. Ядрихинская и др.; науч. ред. Н.К. Ерилова; Министерство образования и науки РФ, ФГБОУ ВПО «Воронежский государственный университет инженерных технологий». - Воронеж: Издательство Воронежского государственного университета, 2014. - 209 с.: ил. - Библиогр. в кн. - ISBN 978-5-00032-057-0; То же [Электронный ресурс]. - URL: <http://biblioclub.ru/index.php?page=book&id=335994>
5. Основы научных исследований: учебное пособие / сост. О.А. Ганжа, Т.В. Соловьева; Министерство образования и науки Российской Федерации, Волгоградский государственный архитектурно-строительный университет. - Волгоград: Волгоградский государственный архитектурно-строительный университет, 2013. - 97 с.: ил., табл., схем. - Библиогр. в кн. - ISBN 978-5-98276-566-6; То же [Электронный ресурс]. - URL: <http://biblioclub.ru/index.php?page=book&id=434797>

Supplementary literature:

1. Ласковец, С.В. Методология научного творчества: учебное пособие / С.В. Ласковец. - Москва: Евразийский открытый институт, 2010. - 32 с. - ISBN 978-5-374-00427-4; То же [Электронный ресурс]. - URL: <http://biblioclub.ru/index.php?page=book&id=90384>
2. Шевяков, Л.Д. Как работать над диссертацией / Л.Д. Шевяков. - Изд. 4-е. - Москва: Издательство Академии Наук СССР, 1960. - 38 с.; То же [Электронный ресурс]. - URL: <http://biblioclub.ru/index.php?page=book&id=473726>
3. Лаптев Владимир Валентинович. Ученая степень в России: реальность и перспективы [текст] / В.В. Лаптев, С.А. Писарева, А.П. Тряпицына // Высшее образование в России. 2013. №4. С. 26-37

The program was drawn up in accordance with the requirements of the OS of the RUDN.

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