Federal State Autonomous Educational Institution of Higher Education
PEOPLES' FRIENDSHIP UNIVERSITY OF RUSSIA
RUDN University

Agrarian and Technological Institute

educational division (faculty/institute/academy) as higher education programme developer

COURSE SYLLABUS

Computer science

course title

Recommended by the Didactic Council for the Education Field of:

36.05.01 Veterinary

field of studies / speciality code and title

The course instruction is implemented within the professional education programme of higher education:

36.05.01 Veterinary

higher education programme profile/specialisation title

1. GOALS AND OBJECTIVES OF THE COURSE

The aim of mastering the course "**Computer science**" is the formation and development of competencies aimed at using modern computer technologies, familiarizing students with the basics of modern information technologies, their development trends, teaching students the principles of building information models, analyzing the results obtained, using modern information technologies.

2. REQUIREMENTS FOR LEARNING OUTCOMES

The implementation of the course "**Computer science**" is aimed at creating the following competencies (parts of competencies) for students:

Table 2.1. List of competencies formed by students during the development of the course (results of the development of the course)

Competence code	Competence descriptor	Indicators of competence accomplishment (within the course)
GC-1	Is able to critically analyze problem situations based on a systematic approach, to develop a strategy of action	GC-1.3 Searches for information to solve a given problem using various types of queries;
GC-12	The ability to search for the right sources of information and data, to perceive, analyze, remember and transmit information using digital tools, as well as using algorithms when working with data obtained from various sources to effectively use the information to solve problems; to assess information, its reliability, to build logical conclusions on the basis of incoming information and data.	GC-12.2 Evaluates information, its reliability, builds logical conclusions on the basis of incoming information and data.
GPC-7	Is able to understand the principles of modern information technologies and use them to solve problems of professional activity	GPC-7.1 Understands the principles of modern computer technology and telecommunications and is able to use them to solve professional problems

3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE

The course "**Computer science**" refers to the mandatory part of block B1 of the Educational Program of Higher Education.

As part of the Educational Program of Higher Education, students also master other courses and /or practices that contribute to achieving the planned results of mastering the course "**Computer science**".

Table 3.1. List of Higher Education Program components courses that contribute to expected learning outcomes

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*
GC-1	Is able to critically analyze problem situations based on a systematic approach, to develop a strategy of action		Maths Interdisciplinary module Study practice Preparation for and passing the state exam
GC-12	The ability to search for the right sources of information and data, to perceive, analyze, remember and transmit information using digital tools, as well as using algorithms when working with data obtained from various sources to effectively use the information to solve problems; to assess information, its reliability, to build logical conclusions on the basis of incoming information and data.		Biometrics in veterinary medicine Study practice Preparation for and passing the state exam
GPC-7	Is able to understand the principles of modern information technologies and use them to solve problems of professional activity		Study practice Clinical internship Industrial practice Academic research practice with the preparation of a scientific qualification project Preparation for and passing the state exam

4. COURSE WORKLOAD AND TRAINING ACTIVITIES
Course workload of the course "**Computer science**" is 2 credits.

*Table 4.1. Types of academic activities during the period of the HE program mastering for **full-time** study*

Types of academic activities		HOURS	Semesters			
			2	-	-	-
Contact academic hours		54	54	-	-	-
including						
Lectures		18	18	-	-	-
Lab work		36	36	-	-	-
Seminars (workshops/tutorials)		-	-	-	-	-
Self-study		8	8	-	-	-
Evaluation and assessment (exam/pass/fail grading)		10	10	-	-	-
Course workload	Academic hour	**72**	**72**	**-**	**-**	-
	Credit unit	**2**	**2**	**-**	**-**	-

5. COURSE CONTENTS

Table 5.1 Content of the course (module) by type of academic work

Modules	Content of the modules (topics)	Types of academic activities
Module 1. Office365 corporate service	Topic 1.1. Service architecture, General settings, Access policies Outlook, Calendar, Users OneDrive, Teams	Lectures, Lab work.
Module 2. Microsoft Word 2016 text editor	Topic 2.1. General settings Typing rules Page Setup Paragraph formatting Bullets, lists, and numbers Graphic Objects Tables Patch and annotations Templates Styles, Headings, Table of contents References Document Merging	Lectures, Lab work.
Module 3. Microsoft Excel 2016 spreadsheet processor	Topic 3.1. General Information Cell format Addressing Formulas and functions Diagrams Sorting Filters Summary tables Connecting to External Sources	Lectures, Lab work.

Module 4. Microsoft PowerPoint 2016 Presentation Preparation Software	Topic 4.1. General Information Slide options Images SmartArt Tables Animations Recommendations	Lectures, Lab work.

6. COURSE EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Table 6.1. Material and technical support of the course

Classroom for Academic Activity Type	*Equipping the classroom*	**Specialized educational/laboratory equipment, software and materials for the development of the course** (if necessary)
Lecture	An auditorium for conducting lecture-type classes, equipped with a set of specialized furniture; a board (screen) and technical means of multimedia presentations.	-
Laboratory	An auditorium for laboratory work, individual consultations, routine monitoring and interim certification, equipped with a set of specialized furniture and equipment.	-
Self-studies	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to an electronic information and educational environment.	-

7. RESOURCES RECOMMENDED FOR COURSE STUDIES

Main readings:

1. Isaac, M.P. Calculations, graphs and data analysis in Excel 2010. Samouchetel / M.P. Isaak. - SPb.: Science and Technology, 2013. - 352 c.
2. Bill Jelen, Michael Alexander. Summary tables in Microsoft Excel 2013. Williams Publishers, 2017.- 448 p.
3. Kozlov, A. Yu. Statistical data analysis in MS Excel: Tutorial / A.Yu. Kozlov, V.S. Mkhitaryan, V.F. Shishov. - M.: INFRA-M, 2013. - 320 c.
4. Konrad Karlberg. Business analysis using Excel. Williams Publishers, 2015.- 576 p.
5. Mirkin B.G. Introduction to data analysis: Textbook and workshop / B.G. Mirkin. - Lyubertsy: Yurait, 2016. - 174 c.
6. Kuleshova O.V., Microsoft Excel 2010. Extended possibilities. The solution of practical tasks. Computer Training Center "Specialist", 2012.

Additional Readings:
1. Goryainova E.R. Applied methods of statistical data analysis: Textbook / E.R. Goryainova, A.R. Pankov, E.N. Platonov. - MOSCOW: GU HSE INSTITUTE. 2012. - 310 с.
2. Leskovets, Y. Leskovets, A. Rajaraman. - M.: DMC, 2016. - 498 с.
3. Tyurin Y.N. Data Analysis on the Computer: Tutorial / Y.N. Tyurin, A.A. Makarov; Ed. by V.E. Figurnov. - MOSCOW: ID FORUM, 2013. - 368 с.

Internet sources

1. Electronic libraries (EL) of RUDN University and other institutions, to which university students have access on the basis of concluded agreements:
- RUDN Electronic Library System (RUDN ELS) http://lib.rudn.ru/MegaPro/Web
- EL "University Library Online" http://www.biblioclub.ru
- EL "Yurayt" http://www.biblio-online.ru
- EL "Student Consultant" www.studentlibrary.ru
- EL "Lan" http://e.lanbook.com/
- EL "Trinity Bridge"

2.*Databases and search engines:*
- electronic foundation of legal and normative-technical documentation http://docs.cntd.ru/
- Yandex search engine https:// www .yandex.ru/
- Google search engine https://www.google.ru/
- Scopus abstract database http://www.elsevierscience.ru/products/scopus/

Educational and methodological materials for independent work of students during the development of the course/ module*:
1. A course of lectures on the course " **Computer science**".
2. Laboratory workshop on the course " **Computer science** ".
   * - The training toolkit and guidelines for the internship are placed on the internship page in the university telecommunication training and information system under the set procedure.

8. ASSESSMENT TOOLKIT AND GRADING SYSTEM* FOR EVALUATION OF STUDENTS' COMPETENCES LEVEL AS COURSE RESULTS

The assessment toolkit and the grading system* to evaluate the level of competences (competences in part) formation as the course results are specified in the Appendix to the course syllabus.

* The assessment toolkit and the grading system are formed on the basis of the requirements of the relevant local normative act of RUDN University (regulations / order).

DEVELOPERS:

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Position, Basic curriculum	Signature	Full name.

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