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**Agrarian and Technological Institute** 

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

### **COURSE SYLLABUS**

Feeding animals with the basics of forage production

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 "**Feeding animals with the basics of forage production**" is to study the basics of animal nutrition, the organization of feeding different types of animals to obtain genetically determined productivity with high quality, preservation of health and reproduction.

### 2. REQUIREMENTS FOR LEARNING OUTCOMES

The implementation of the course "**Feeding animals with the basics of forage production**" is aimed at creating the following competencies (parts of competencies) for students:

Competence	Competence descriptor	Indicators of competence
code	<b>1</b>	<b>accomplishment</b> (within the discipline)
GPC-2	Is able to interpret and evaluate in professional activity the influence of natural, socio-economic, genetic and economic factors on the physiological state of the animal organism	<ul> <li>GPC-2.1 Have knowledge of the influence of natural, socio-economic, genetic and economic factors on the animal body.</li> <li>GPC-2.2 Can establish the presence and validity of cause-effect relationships between the impact of certain etiological factors on the animal body and the development of diseases</li> <li>GPC-2.3 Knows the methods of preventive and therapeutic correction of the impact of unfavorable environmental factors that can cause deterioration of animal health</li> </ul>
PC-10	Ability to analyze and adjust animal feeding to improve the effectiveness of the therapeutic process, prescribe therapeutic diets.	<ul> <li>PC-10.1 Able to analyze a patient's diet to identify factors predisposing to the development of disease.</li> <li>PC-10.2 Able to justify the prescription of special food to an animal for therapeutic purposes for various diseases</li> <li>PC-10.3 Can recommend approximate composition of therapeutic diets, desirable ratio of nutrients, availability of special additives and components that enhance the therapeutic effect of the diet</li> <li>PC-10.4 Able to use special programs and databases to select industrial therapeutic diets, as well as to compose</li> </ul>

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

	individual therapeutic diets for animals
	of different species.

### **3. COURSE IN HIGHER EDUCATION PROGRAMME STRUCTURE**

The course "**Feeding animals with the basics of forage production**" 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 disciplines and /or practices that contribute to achieving the planned results of mastering the course "Feeding animals with the basics of forage production".

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

Competence code	Competence descriptor	Previous courses/modules, internships*	Subsequent courses/modules, internships*	
GPC-2	Is able to interpret and evaluate in professional activity the influence of natural, socio-economic, genetic and economic factors on the physiological state of the animal organism	Biology with the basics of ecology Veterinary genetics Breeding with the basics of private animal husbandry Animal health and welfare	General and Veterinary Ecology Base component Study practice Clinical internship Industrial practice Academic research practice with the preparation of a scientific qualification project Preparation for and passing the state exam	
PC-10	Ability to analyze and adjust animal feeding to improve the effectiveness of the therapeutic process, prescribe therapeutic diets.		Medicinalandpoisonous plantsFodder plantsHorse diseasesDiseases of productiveanimalsDiseases of small petsDiseases of bees andentomophagesFishPathologyanimalsDiseasesOfexoticanimalsClinical 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 "Feeding animals with the basics of forage production" is 7 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		Seme	sters	
			4	5	-	-
Contact academic hours		87	36	51	-	-
including						
Lectures		35	18	17	-	-
Lab work		52	18	34	-	-
Seminars (workshops/tutorials)		-	-	-	-	-
Self-study		135	62	73	-	-
Evaluation and assessment (ex	Evaluation and assessment (exam/pass/fail		10	20	-	-
grading)						
	Academic	252	108	144	-	-
Course workload hour						
Course workloau	Credit	7	3	4	-	-
	unit					

### **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. Assessment of feed nutrition.	Topic 1.1 Chemical composition of feed as a primary indicator of their nutritional value. The content and concentration of nutrients in feed.	Lectures, Lab work.
	Topic 1.2 Determination of digestibility of feeds and diets. The use of nutrients in the animal's body.	Lectures, Lab work.

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	Topic 1.3 Energy nutrition of feed. CE and feed units. Energy nutritional value of feed. Exchange energy.	Lectures, Lab work.
	Topic 1.4 Protein nutrition of feed.	Lectures, Lab work.
	Topic 1.5 Mineral and vitamin nutrition of feed.	Lectures, Lab work.
Module 2. Feed.	Topic 2.1 Production evaluation of feed.	Lectures, Lab work.
	Topic 2.2 Analysis of feeds of various origins.	Lectures, Lab work.
	Topic 2.3 Types of feed and their purpose.	Lectures, Lab work.
Module 3. Normalized feeding of animals of	Topic 3.1 Norms of animal feeding.	Lectures, Lab work.
different species.	Topic 3.2 The technique of making rations.	Lectures, Lab work.
	Topic 3.3 Analysis of diets.	Lectures, Lab work.
	Topic 3.4 Feeding cattle.	Lectures, Lab work.
	Topic 3.5 Feeding sheep.	Lectures, Lab work.
	Topic 3.6 Feeding goats.	Lectures, Lab work.
	Topic 3.7 Feeding horses.	Lectures, Lab work.
	Topic 3.8 Feeding pigs.	Lectures, Lab work.
	Topic 3.9 Feeding birds.	Lectures, Lab work.
	Topic 3.10 Feeding dogs and cats.	Lectures, Lab work.

## 6. COURSE EQUIPMENT AND TECHNOLOGY SUPPORT REQUIREMENTS

Classroom for Academic Equip Activity Type	ping the classroom	Specialized educational/laboratory equipment, software and materials for the development of the course (if necessary)
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Table 6.1. Material and technical support of the discipline

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. Khaziakhmetov F.S. Rational feeding of animals [Electronic resource]: Textbook / F.S. Khaziakhmetov. St. Petersburg: Publishing House "Lan", 2017. 364 p. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn FindDoc&id=464959&idb=0
- Khokhrin S.N. Feeding cattle, sheep, goats and horses : textbook / S.N. Khokhrin. 2nd ed., supplement and revision ; Electronic text data. - St. Petersburg : Quadro, 2019. - 488 p. <u>http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\_FindDoc&id=487733&idb=0</u>
- Priestach Nikolay Vladimirovich. Feeding of farm animals with the basics of feed production / N.V. Priestach, L.N. Priestach. Electronic text data. St. Petersburg : Quadro, 2020. - 372 p. http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\_FindDoc&id=487735&idb=0

### Additional Readings:

- 1. Faritov T.A. Feed and feed additives for animals [Electronic resource] : Textbook / T.A. Faritov. St. Petersburg : Publishing house "Lan", 2010. 304 p.<u>http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\_FindDoc&id=465289&idb=0</u>
- Khokhrin S.N. Feeding dogs [Electronic resource] : Textbook / S.N. Khokhrin, K.A. Rozhkov, I.V. Lunegova. - St. Petersburg : Publishing house "Lan", 2015. - 288 p. <u>http://lib.rudn.ru/MegaPro/UserEntry?Action=Rudn\_FindDoc&id=465112&idb=0</u>
- Tokarev V. S., Animal feeding with the basics of feed production. Textbook. M.: Infra-M, 2016. - 592 p. Alexandrov S., Kosova T. Rabbits. Breeding growing feeding. - St. Petersburg: AST, 2011. - 157 p.

- 4. Rakhmanov A. I., Maslova Yu. V. Feeding domestic chickens. St. Petersburg: Aquarium-Print, 2016. 48 p.
- 5. Feeding horses. /Kalashnikov V. V., Draganov I.F., Memedeikin V. G. Ed. Svitova V. I. - M.: GEOTAR-Media, 2011. - 224 p.

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" <u>http://www.biblio-online.ru</u>

- EL "Student Consultant" www.studentlibrary.ru

- EL "Lan" <u>http://e.lanbook.com/</u>

- EL "Trinity Bridge"

### 2. Databases and search engines:

- electronic foundation of legal and normative-technical documentation <a href="http://docs.cntd.ru/">http://docs.cntd.ru/</a>

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

Educational and methodological materials for independent work of students during the development of the discipline/ module\*:

- 1. A course of lectures on the course "Feeding animals with the basics of forage production".
- 2. Laboratory workshop on the course "Feeding animals with the basics of forage production".

\* - 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<sup>\*</sup> 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).

### **DEVELOPER:**

Associate Professor of the Department of Veterinary Medicine

Signature

Bolshakova M.V.

HEAD OF EDUCATIONAL DEPARTMENT:

Department of Veterinary N	Medicine
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Name Basic Curriculum

Vatnikov Yu.A. Full name.

Signature

Signature

#### HEAD OF HIGHER EDUCATION PROGRAMME: Director of the Department of Veterinary Med

Director of the Department of Veterinary Medicine Position, Basic curriculum Vatnikov Yu.A.