



SULAWE Module description

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| Code Module 2 | Name of the module Animal welfare |
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1. Learning Objectives of the Module

Qualification objectives

Formation of knowledge, abilities and skills related to the implementation of animal welfare in animal husbandry among students of higher education.

Summary of the Content

Which professional, methodological, practical and interdisciplinary contents will be delivered?

The educational component «Animal welfare» studies a complex of concepts regarding the physical, mental and natural state of an animal at a certain moment of its life and the ability to satisfy its needs. Algorithm of the influence of factors of the external environment on the animal's body. Adaptation of the animal body and functioning in temporal and spatial rhythm. In addition, disease prevention, treatment, provision of proper shelter, maintenance, feeding, humane treatment, use and slaughter. Assessment of the conditions of keeping animals under different technological approaches.

The goal: to acquire professional, scientific-research competencies, necessary for innovative professional, scientific-research activities and the introduction of modern technologies in animal husbandry in general, and veterinary medicine in particular.

The program of the educational component contains educational material that substantiates the tasks of the professional activity of veterinary medicine specialists and the technology of production and processing of livestock products and covers the ethical, veterinary, legal and psychological aspects of animal welfare. The program provides for the study of the theoretical foundations of well-being, ethology, conditions for keeping animals, humane slaughter and euthanasia according to national and European requirements.

Teaching/learning forms (summary)

Lectures, laboratory/practical classes, seminar, excursion, master class, self work (including control).

2. Preconditions for participation

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| Knowledge, skills, competences | <p>Which knowledge, skills, competences are required for successful participation?</p> <p>The study of an academic discipline involves the formation of the necessary students knowledge and skills:</p> <ul style="list-style-type: none">- Ability to carry out measures to protect the health and ensure the well-being of farm animals. |
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| | <ul style="list-style-type: none"> - Ability to develop strategies for safe, sanitary animal keeping. - Ability to develop and implement measures aimed at protecting the population from diseases common to animals and humans. - To know the morphology, physiology and biochemistry of various species of animals in order to implement effective technologies for the production and processing of their products. Know the features of protecting the population from dangerous pathogens; - To know the production processes of biotechnological products; - To have techniques for hazard identification, classification of sources of hazardous effects; - Ability to apply knowledge of physiology and biochemistry to establish the physiological state and needs of animals of various species; - The ability to possess knowledge about the place and role of a specialist in preserving animal and human health; - The ability to have knowledge about the specifics of physiological processes that are related to behavior; - The ability to possess knowledge about ways of influence of livestock facilities on the environment; |
| <p>Preparation for the module</p> | <ol style="list-style-type: none"> 1. Broom DM. Animal welfare: an aspect of care, sustainability, and food quality required by the public. <i>J Vet Med Educ.</i> 2010 Spring;37(1):83-8. doi: 10.3138/jvme.37.1.83. PMID: 20378884. 2. Korzh OP Ethology of animals: a textbook. - Sumy: University Book, 2011. - 236 p. 3. Koziy V. I. Animal welfare (historical, scientific and normative aspects): a study guide / Vasyl Ivanovich Koziy. – Bila Tserkva, 2012. – 319 p. 4. Singer P. Liberation of animals / Peter Singer; lane. from English Kateryna Humeniuk. - Kyiv: Pabulum, 2019. 456 p. 5. Zubchenko N. I. International legal cooperation of the state in the sphere of ensuring the welfare of animals and their protection from cruelty: monograph / N.M. I. Zubchenko; under science ed. T. R. Korotky. – Odesa: Phoenix, 2016. – 284 p. |

3. Link to the module on sustainable development

Contents

What aspects of sustainable development (economic, environmental, social) will be considered?

Animal welfare is one of the most important aspects of the sustainable development of animal husbandry, which forms a system of approaches to environmental factors for the adaptation of the animal organism under the conditions of technological load. Separate aspects that determine the sustainability of development are the components of comfortable



conditions for keeping animals. A special place in the system of studying the sustainable development of animal welfare is mastering the standards of animal welfare, which are associated with the safety and high quality of products obtained from them. Learning and mastering the concept of «five freedoms» - freedom from pain, injuries and diseases; freedom from hunger and thirst; freedom from discomfort and stress; freedom from fear and suffering; freedom in reproducing natural behavior in accordance with the requirements of the World Organization for the Protection of Animal Life.

4. Examination indicators (prerequisites for calculating credit points)

| Type and duration (min) | Fraction % |
|-------------------------|---|
| Written exam (90): | LNUVMB: 50% : 50% PSAU: 80% : 20% NUBiP: 70% : 30% V. Dahl EUNU: 60% : 40% |

5. Organization

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| Responsible for the module Prof. Dr. please insert the name: LNUVMB: Nadiia Magrelo PSAU: Svitlana Usenko NUBiP: Natalia Prokopenko V. Dahl EUNU: Liudmyla Parkhomenko | | |
| Type of the module LNUVMB, PSAU, V. Dahl EUNU: 204, 211 – compulsory NUBiP: 204 elective | Regular cycle Annually | Duration 1 Semester |
| Admission requirements 204: Bachelor's / Master's degree 211: Master's degree | ECTS 4 ECTS | Attendance at semester weekly hours 4 |
| Workload 4 ECTS x 30 hours = 120 hours – total workload, with the following distribution 4 ECTS | | |
| Presence/ Contacts 40-62 hours / 33-50% | Preparation/control/self work 80 - 58 hours / 67-50% | Tasks/Group work 0 |

6. The module design

| Subtopics | |
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| 1 | Animal welfare in livestock production (biological, physiological, ethological aspects) |



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| 2 | National and international legal implications and restrictions regarding animal welfare |
| 3 | Modern and innovative methods/technologies for the increase and assessment of animal welfare in livestock production |
| 4 | Animal welfare in transport and trade of live animals |
| 5 | Slaughter of animals, euthanasia |

6.1. Subtopics description

| Code | Title |
|------------|---|
| Subtopic 1 | Animal welfare in livestock production (biological, physiological, ethological aspects) |

6.2. Subtopics design

Learning outcomes

What knowledge and skills must be acquired to achieve the learning objectives of the module? What competencies will it contribute to?

After completing the study of the subtopic, the student will have the necessary knowledge and skills to understand and solve problems related to animal welfare. In particular, Understanding the physiological aspects of different types of animals and their natural needs. Knowledge about the physiology and behavior of animals, about their care, about the methods and systems of keeping animals that ensure the physical and mental health of animals, physiological and behavioral signs of stress in different types of animals, the basic principles and concepts of well-being, the principles of the «5 freedoms» They will acquire the skills to assess the physiological state of an animal and its physiological needs, the daily care of animals and the ethical principles of interaction with them, to apply knowledge about the methods and systems of keeping animals that ensure the physical and mental health of animals in practice. They master the methods of determining the level of stress based on the ethological profile and the ways of its prevention, the ability to apply knowledge of the basic principles and concepts of animal welfare in production conditions, and to evaluate the conditions of keeping animals based on the principles of the «5 freedoms».

Contents

What professional, methodical, practical and interdisciplinary content does the subtopic cover?

- Definition of animal welfare as a science, research methods, main tasks, basic principles of the concept:
 - The meaning of the principle of 5 freedoms. Indicators of good and bad well-being.
 - Stress and adaptation in the assessment of modern animal husbandry technologies.
- Definition of ethology as a discipline, goals, tasks and research methods:
 - The founders of ethology.
 - Individual, reproductive, social forms of animal behavior.
 - Organization of groups and social behavior of animals.
 - Animal communication (information exchange), classification of messages used by animals.
 - Ontogeny of animal behavior as a result of interaction between genotype and environment:
 - The main unconditional reflexes formed in the process of evolution and their importance for ensuring constant adaptation of animals to changes in environmental conditions and survival.
- Extrapolation of animal behavior and behavior in extreme situations.



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| <ul style="list-style-type: none"> – Formation of positive behavior in animals. – Animal behavior depending on environmental factors. – Zoopsychology: <ul style="list-style-type: none"> - The subject and tasks of zoopsychology. – History of the development of science. – Double determination of animal psyche. – Memory and emotions of animals. – Methods of animal welfare research with modern technologies of production of animal husbandry products. – Methods of ethological research. Study of changes in physiological indicators – Basics of ethology of productive and non-productive animals <ul style="list-style-type: none"> – Peculiarities of ensuring the natural ethological and welfare needs of the animal body in animal husbandry – The significance of the natural ethological needs of the animal body. – Animal behavior depending on environmental factors – Factors that significantly affect changes in behavior, productivity and health of animals |
| <p>Forms of teaching/learning e.g. problem-based lecture, lecture-dialogue, binary lecture, lecture-consultation, seminar (with exercise), laboratory work, project, excursion, workshop, master class, workshop (for creative individuals), etc.</p> <p>Lecture, workshop, self work</p> |
| <p>Teaching/learning methods</p> <p>Lectures, discussions, group work, coaching of a study group, case analysis, presentations, use of technologies, use of various assessment methods, self work</p> <p>Lecture, presentation, discussion, self work</p> |
| <p>Literature/educational materials</p> <ol style="list-style-type: none"> 1. Broom DM. Animal welfare: an aspect of care, sustainability, and food quality required by the public. J Vet Med Educ. 2010 Spring;37(1):83-8. doi: 10.3138/jvme.37.1.83. PMID: 20378884. 2. Korzh OP Ethology of animals: a textbook. - Sumy: University Book, 2011. - 236 p. 3. Koziy V. I. Animal welfare (historical, scientific and normative aspects): a study guide / Vasyl Ivanovich Koziy. – Bila Tserkva, 2012. – 319 p. 4. Marçal-Pedroza MG, Canozzi MEA, Campos MM, Sant'Anna AC. Effects of dairy cow temperament on milk yield: a systematic review and meta-analysis. J Anim Sci. 2023 Jan 3;101: skad099. doi: 10.1093/jas/skad099. PMID: 37004202; PMCID: PMC10158527. |
| <p>Other</p> <p>Educational aids, practical visits, guest lecturers</p> |

6.3. Organisation of the sub-topic

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|-------------------------|---|-------------------------|--|------------------------------|
| ECTS mark 1,6 | Semester Week Hours 4 | Grouping/ No | Recommended academic semester LNUVMB: 204 – 3; 211 - 3 PSAU: 204 – 3; 211 - 3 | Language Ukrainian |
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| | | NUBiP: 204 - 2 V. Dahl EUNU: 204 – 1; 211 – 3 | |
| Workload 1,6 ECTS x 30 hours = 48 hours, with the following distribution | | | |
| Lectures 8 hours /17% | Practical Tasks/Group work 16 hours / 33% | Preparation/ follow up/ self-study 24 hours / 50% | |

6.1.Subtopics description

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|--------------------|--|
| Code Subtopic 2 | Title National and international legal implications and restrictions regarding animal welfare |
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6.2. Subtopics design

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| <p>Learning outcomes</p> <p>What knowledge and skills must be acquired to achieve the learning objectives of the module? What competencies will it contribute to?</p> <p>After studying the subtopic, the student will get the necessary knowledge about national and international legal and regulatory documents that regulate the welfare of animals. Will be able to define and protect animal rights in practice in accordance with current national and international legislation, analyze complex legal texts and determine their main provisions and requirements, analyze the impact of legal norms on animal welfare and develop recommendations for their improvement, analyze the impact of international legal norms and standards on animal welfare and develop recommendations for their improvement, effectively use various sources to obtain up-to-date information on animal welfare and relevant legislation. These competencies will help students use legal and regulatory tools to improve the condition of animals and ensure their appropriate welfare.</p> |
| <p>Content</p> <p>What professional, methodical, practical and interdisciplinary content does the subtopic cover?</p> <ul style="list-style-type: none"> – National and international legal and regulatory documents in animal welfare – European and national public organizations on issues of bioethics, animal welfare and protection – Implementation of European standards on animal welfare into Ukrainian legislation |
| <p>Forms of teaching/learning</p> <p>e.g. problem-based lecture, lecture-dialogue, binary lecture, lecture-consultation, seminar (with exercise), laboratory work, project, excursion, workshop, master class, workshop (for creative individuals), etc.</p> <p>Lecture, seminar, laboratory/practical classes, self work</p> |
| <p>Teaching/learning methods</p> <p>e.g., lecture, discussion, exercise, group training, case study, business game, role play, group work, presentations, project work</p> <p>Lecture, presentation, case analysis, group work, discussion</p> |
| <p>Literature/educational materials</p> |



1. European Commission, 2022a. Factual summary of the online public consultation in support to the fitness check and revision of the EU animal welfare legislation, Ref. Ares(2022)2359311 – 30 March 2022. EU, Brussels, Belgium.
2. European Commission, 2022b. Working document of Commission's staff: Fitness Check, summary – The EU animal welfare legislation. 4 October 2022, SWD (2022) 329 final; Retrieved on 11 July 2023 from https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12400-Tierschutz-Bewertung-der-EU-Vorschriften-Eignungsprüfung_de.
3. European Council, Regulation (EU) 2017/625 of the European Parliament and of the Council of 15 March 2017 on official controls and other official activities performed to ensure the application of food and feed law, rules on animal health and welfare, plant health and plant protection products, amending Regulations (EC) No 999/2001, (EC) No 396/2005, (EC) No 1069/2009, (EC) No 1107/2009, (EU) No 1151/2012, (EU) No 652/2014, (EU) 2016/429 and (EU) 2016/2031 of the European Parliament and of the Council, Council Regulations (EC) No 1/2005 and (EC) No 1099/2009 and Council Directives 98/58/EC, 1999/ 74/EC, 2007/43/EC, 2008/119/EC and 2008/120/EC, and repealing Regulations (EC) No 854/2004 and (EC) No 882/2004 of the European Parliament and of the Council, Council Directives 89/608/EEC, 89/662/EEC, 90/425/EEC, 91/496/EEC, 96/23/EC, 96/93/EC and 97/78/EC and Council Decision 92/438/EEC (Official Controls Regulation). Retrieved on 11 July 2023 from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R0625>.
4. Zubchenko N. I. International legal cooperation of the state in the sphere of ensuring the welfare of animals and their protection from cruelty: monograph / N.M. I. Zubchenko; under science ed. T. R. Korotky. – Odesa: Phoenix, 2016. – 284 p.
5. Butkevich O. V. Modern legal trends and international obligations of Ukraine in the field of animal protection. Scientific report. – UAMP, KNUTSH, IMV KNUTSH. - Kyiv, 2015. - 24 p.
6. Korobko, I. I. Enshrining humane attitude towards animals in the Constitution of Ukraine, as a necessary step on the way to European integration of Ukraine / I. I. Korobko // Legislation and international legal obligations of Ukraine in the field of animal protection: problems of compliance: theses addendum. international science and practice conference (Kyiv, June 17, 2015). - Kyiv, 2015. - P. 20-23.

Other

e.g., tutorials, online parts, hands-on visits, guest experts, etc.
Practical visits, educational posts, guest lecturers

6.3. Organisation of the sub-topic

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| ECTS-marks 0,6 | Semester Week Hours 4 | Grouping/ No | Recommended academic semester LNUVMB: 204 – 3; 211 - 3 PSAU: 204 – 3; 211 - 3 NUBiP: 204 - 2 V. Dahl EUNU: 204 – 1; 211 – 3 | Language Ukrainian |
| Workload 0,6 ECTS-mark x 30 hours = 18 hours, with the following distribution | | | | |
| Lectures 2 hours / 11% | | Practical Tasks/Group work 6 hours /33% | | Preparation/ follow up/ self-study 10 hours /56% |



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6.1. Subtopics description

| Code | Title |
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| Subtopic 3 | Modern and innovative methods/technologies for the increase and assessment of animal welfare in livestock production |

6.2. Subtopics design

Learning outcomes

What knowledge and skills must be acquired to achieve the learning objectives of the module?
What competencies will it contribute to?

After studying the subtopic, the student will acquire the necessary knowledge and skills to understand and solve problems related to modern and innovative methods/technologies for improving and evaluating well-being. Namely: knowledge of innovative technologies, understanding of modern methods and technologies used to improve the conditions of animal husbandry, familiarization with the latest developments in the field of feeding, veterinary medicine, husbandry technologies and other innovative approaches. Skills in assessing and monitoring the well-being of animals, i.e. studying methods of assessing the physiological and psychological state of animals and developing skills in monitoring and determining indicators of well-being in different conditions of keeping. Familiarization with the use of various technologies in veterinary medicine, breeding, genetics and other areas of animal husbandry. Learn how to use technical devices to measure and control the conditions of keeping and well-being of animals. Master the skills of collecting and processing data to determine the effectiveness and impact of innovative methods on animal welfare, analyze research results and develop recommendations for improving housing conditions. They will study innovative approaches aimed at reducing the negative impact of animal husbandry on the environment. Obtaining these competencies will allow students to effectively implement innovative approaches in the field of animal husbandry, improve housing conditions and promote animal welfare.

Content

What professional, methodical, practical and interdisciplinary content does the subtopic cover?

- Principles of well-being in the production technology of livestock products – Principles of well-being in the production technology of pig farming products
- Principles of well-being in the production technology of poultry products
- Principles of well-being in small animal production technology /sheep breeding, goat breeding and animal husbandry/
- Assessment of animal welfare for milk production
- Assessment of animal welfare for meat production
- Assessment of animal welfare for egg production
- Improving animal welfare in dairy farming;
- Improving the well-being of pig farming animals;
- Improvement of well-being for the production of poultry meat;
- Improving the well-being of poultry through the production of edible eggs; - Improving the welfare of animals in sheep and goat breeding;
- Improving the welfare of animals in rabbit breeding and fur breeding;
- Improving the well-being of animals in horse breeding;



- Improving the welfare of animals in beekeeping;
- Improving well-being in fish farming and aquaculture;
- Principles of well-being in the care of unproductive animals.

Forms of teaching/learning

e.g. problem-based lecture, lecture-dialogue, binary lecture, lecture-consultation, seminar (with exercise), laboratory work, project, excursion, workshop, master class, workshop (for creative individuals), etc.

Lecture, laboratory/practical classes

Teaching/learning methods

e.g., lecture, discussion, exercise, group training, case study, business game, role play, group work, presentations, project work

lecture, discussion, exercise, group work, presentations

Literature/educational materials

Literature, equipment, software

Council Directive 2008/120/EC of 18 December 2008 laying down minimum standards for the protection of pigs. Official Journal L 47, 18.02.2009. P. 5–13.

2. Council Directive 2008/120/EC of 18 December 2008 laying down minimum standards for the protection of calves. Official Journal L 10, 11.01.2009. P. 07–0013.

3. Council Directive 1999/74/EC of 19 July 1999 laying down minimum standards for the protection of laying hens. Official Journal L 203, 03.08.1999. P. 0053–0057.

4. Council Directive 2007/43/EC of 28 June 2007 laying down minimum rules for the protection of chickens kept for meat production, art 3. Official Journal L 47, 18.02.2009. P. 5–13.

5. Council Directive 98/58/EC of 20 July 1998 concerning the protection of animals kept for farming purposes. – Official Journal L 221, 08.08.1998. p. 0023– 0027.

6. Council Regulation (EC) No 1/2005 of 22 December 2004 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97. L 3, 05.01.91. P. 0001–0042

7. Banhazi T. and Santhanam B., 2013. Practical evaluation of cleaning methods that could be implemented in livestock buildings in livestock housing: modern management to ensure optimal health and welfare of farm animals. Livestock housing: Modern management to ensure optimal health and welfare of farm animals. Wageningen Academic Publishers, 123-148.

8. Søren Saxmose Nielsen, Julio Alvarez, Dominique Joseph Bicout, Paolo Calistri, Elisabetta Canali, Julian Ashley Drewe, Bruno Garin-Bastuji, Jose Luis Gonzales Rojas, Christian Gortazar Schmidt, Mette S Herskin, Miguel Ángel Miranda Chueca, Barbara Padalino, Paolo Pasquali, Helen Clare Roberts, Hans Spoolder, Karl Stahl, Antonio Velarde, Arvo Viltrop and Christoph Winckler, 2023 Welfare of dairy cows. EFSA Journal. Volume 21, Issue 5, <https://doi.org/10.2903/j.efsa.2023.7993>

The Welfare of Cattle. 2019. Edited By Terry Engle, Donald J. Klingborg, DVM, Bernard E. Rollin. 368 p.

9. Osnovy biobezpeky ta blahopoluchchia tvaryn: monohrafiia / Nedosiekov V.V., ta in. NUBiP Ukrainy, 2021 r. 233 s.

10. Kushnerenko V.H., Zhmurovskiy I.O. Polipshennia umov utrymannia velykoi rohatoi khudoby v umovakh zmin klimatu Tavriiskiyi naukoviyi visnyk Vyp. 109. Ch.2. 2019. S.67-79.

11. Zhukorskiy O.M. Pohodno-klimatychni ta tekhnolohichni chynnyky utrymannia miasnoi khudoby. Kyiv: Ahrarna nauka, 2012. 162 s.

12. Vidomchi normy tekhnolohichnoho proektuvannia. «Skotarski pidpriemstva (kompleksy, fermy, mali fermy)». VNTP-APK-01.05. K.: Minahropolityky, 2005. 111s.



Other

e.g., tutorials, online parts, hands-on visits, guest experts, etc.
Practical visits, educational posts, guest lecturers, farm visits

6.3. Organisation of the sub-topic

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|---|---|---|--|--|
| ECTS-mark 1,2 | Semester Week Hours 4 | Grouping/ No | Recommended academic semester LNUVMB: 204 – 3; 211 - 3 PSAU: 204 – 3; 211 - 3 NUBiP: 204 - 2 V. Dahl EUNU: 204 – 1; 211 – 3 | Language Ukrainian |
| Навантаження 1,2 ECTS-mark x 30 hours = 306 hours, with the following distribution | | | | |
| Lectures 8 hours / 22% | | Practical Tasks/Group work 6 hours /17% | | Preparation/ follow up/ self-study 22 hours /61% |

6.1. Subtopics description

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|---------------------------|--|
| Code Subtopic 4 | Title Animal welfare in transport and trade of live animals |
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6.2. Subtopics design

Learning outcomes

What knowledge and skills must be acquired to achieve the learning objectives of the module? What competencies will it contribute to?

After studying the subtopic, the student will acquire the necessary knowledge and skills to understand and solve problems related to animal welfare in the transportation and trade of live animals. Students will learn to understand the physiological needs of different animal species and how they react to stressful situations associated with animal transportation and trade. They will familiarize themselves with national and international laws and standards that regulate the transportation and sale of animals and include rules for ensuring their safety and well-being. Understand the technical aspects of transporting animals, including the choice of means of transport, creating optimal conditions for animals, taking into account temperature and atmospheric conditions, ethical aspects of transporting and selling animals and a responsible attitude to their welfare. They will study the behavior of animals in stressful situations and ways to reduce the negative impact of transportation on their mental state. They learn about the basics of veterinary medicine and checking the health of animals before, during and after transportation.

Content

- What professional, methodical, practical and interdisciplinary content does the subtopic cover?
- Principles of well-being in the transportation and trade of live animals:
- Common problems and stressors faced by animals during transportation. – Animal handling and loading procedures.



- Duration and conditions of transportation.
- Permissible space and planting density.
- Evaluation of the well-being of animals during transportation with different forks of transport
 - Assessment of well-being in the trade of live animals
- Methods of assessing the stress and physical condition of animals during transportation and trade

Forms of teaching/learning

e.g. problem-based lecture, lecture-dialogue, binary lecture, lecture-consultation, seminar (with exercise), laboratory work, project, excursion, workshop, master class, workshop (for creative individuals), etc.

Lecture, laboratory/practical classes, seminar

Teaching/learning methods

e.g., lecture, discussion, exercise, group training, case study, business game, role play, group work, presentations, project work Lecture, presentations, discussion

Literature/educational materials

1. Animals' Angels, 2020. Why exports of live 'farm' animals to non-EU countries should not be permitted without adequate animal welfare guarantees. Policy brief. Retrieved on 11 July 2023 from <https://www.animals-angels.de/projekte/tiertransporte/eu-exporte.html>
2. Cirsovius, T., 2021. Legal opinion. Does an animal welfare-motivated ban on exporting livestock from Germany to animal welfare high-risk states raise legal concerns? Retrieved on 11 July 2023 from https://media.4-paws.org/7/8/a/b/78ab83eed5646e9496d851cb1fa249013556e6b5/VIERPFOTEN_Rechtsgutachten_Tiertransporte_in_Drittstaaten_2021.pdf.
3. European Commission/EFSA, DG Health and Consumer Protection, Scientific Committee on Animal Health and Animal Welfare (SCAHAW), 2002. Report on the welfare of animals during transport (details for horses, pigs, sheep, and cattle) Brussels, 11 March 2002. Retrieved on 11 July 2023 from https://food.ec.europa.eu/system/files/2020-12/sci-com_scah_out71_en.pdf.
4. European Commission/EFSA, Scientific Panel on Animal Health and Welfare (AHAW), 2004. Opinion on a request from the Commission related to the welfare of animals during transport, EFSA-Journal (2004) 44, pp. 1–36. Retrieved on 11 July 2023 from <https://www.efsa.europa.eu/de/efsajournal/pub/1966>.
5. European Commission/EFSA, Panel on Animal Health and Welfare (AHAW), 2022. Scientific Opinion: Welfare of cattle during transport, adopted on 30 June 2022, digital object identifier (doi): [10.2903/j.efsa.2022.7442](https://doi.org/10.2903/j.efsa.2022.7442). EFSA Journal 20, 7442.
6. European Parliament/Committee of Inquiry into the Protection of Animals During Transport (ANIT). Rapporteurs: Buda, D., Carvalhais, I. 2021. Draft report investigating alleged breaches and maladministration of Union law relating to the protection of animals during transport inside and outside the Union, (2020/ 2269(INI)), 2020/2269(INI). Retrieved on 11 July 2023 from https://www.europarl.europa.eu/doceo/document/A-9-2021-0350_EN.html.
7. Marahrens, M., Kernberger-Fischer, I., 2021. The practices of animal welfare during transport in third countries: an overview. Study requested by the ANIT Committee. Retrieved on 11 July 2023 from [https://www.europarl.europa.eu/RegData/etudes/STUD/2021/690877/IPOL_STU\(2021\)690877_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/690877/IPOL_STU(2021)690877_EN.pdf)

Other



e.g., tutorials, online parts, hands-on visits, guest experts, etc. Training manuals, practical visits

6.3. Organisation of the sub-topic

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|---|---|---|--|---|
| ECTS-marks 0,3 | Semester Week Hours 4 | Grouping/ Yrs/No | Recommended academic semester LNUVMB: 204 – 3; 211 - 3 PSAU: 204 – 3; 211 - 3 NUBiP: 204 - 2 V. Dahl EUNU: 204 – 1; 211 – 3 | Language Ukrainian |
| Workload 0,3 ECTS-mark x 30 hours = 9 hours, with the following distribution | | | | |
| Lectures 2 hours / 22% | | Practical Tasks/Group work 4 hours /45% | | Preparation/ follow up/ self-study 3 hours /33% |

6.1. Subtopics description

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|--------------------|---|
| Code Subtopic 5 | Title Slaughter of animals, euthanasia |
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6.2. Subtopics design

Learning outcomes

What knowledge and skills must be acquired to achieve the learning objectives of the module? What competencies will it contribute to?

After studying the topics, the student will acquire the necessary knowledge and skills to understand and solve problems related to the slaughter and euthanasia of animals. Namely, knowledge of the anatomy and physiology of animals related to the process of slaughter and euthanasia. An understanding of different methods of slaughter and euthanasia, including their effects on the body and welfare of animals. Will study modern technologies and innovations in the field of animal slaughter and euthanasia, which are aimed at improving processes and reducing animal suffering. Gain an understanding of ethical issues related to the slaughter and euthanasia of animals, gain an understanding of the influence of cultural and social factors on the perception and practice of animal slaughter and euthanasia. Familiarize yourself with the legislation and regulations governing the slaughter and euthanasia of animals in different countries. Understands the role of veterinary specialists in ensuring humane and ethical treatment of animals, familiarizes himself with the veterinary aspects of euthanasia and the slaughter procedure and aspects related to the protection of animal rights and the humane treatment of animals during slaughter and euthanasia.

Content

What professional, methodical, practical and interdisciplinary content does the subtopic cover?

- Slaughter of animals, euthanasia:
- Scientific data, legislation, ethical provisions and critical provisions of animal slaughter.
- Requirements for transporting animals to slaughter, keeping animals.
- Methods of humane slaughter.



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| <ul style="list-style-type: none"> – Reasons, need and decisions regarding WSPA euthanasia methods for dogs and cats. – Humane slaughter of farm animals – Humane euthanasia – Alternative methods of animal slaughter and euthanasia |
| <p>Forms of teaching/learning e.g. problem-based lecture, lecture-dialogue, binary lecture, lecture-consultation, seminar (with exercise), laboratory work, project, excursion, workshop, master class, workshop (for creative individuals), etc.</p> <p>Lecture, laboratory/practical classes, seminar</p> |
| <p>Teaching/learning methods e.g., lecture, discussion, exercise, group training, case study, business game, role play, group work, presentations, project work Lecture, presentations</p> |
| <p>Literature/educational materials</p> <ol style="list-style-type: none"> 1. Veterinary euthanasia techniques (a practical guide) /Kathleen A. Cooney, Jolynn R. Chappell, Robert J. Callan, Bruce A. Connally/John Wiley & Sons, Inc. Ames, Iowa 50014-8300, USA., 2012. – 197 c. 2. Sivula CP, Suckow MA. Euthanasia. In: Weichbrod RH, Thompson GA, Norton JN, editors. Management of Animal Care and Use Programs in Research, Education, and Testing. 2nd ed. Boca Raton (FL): CRC Press/Taylor & Francis; 2018. Chapter 35. PMID: 29787219. 3. Grandin T. Euthanasia and slaughter of livestock. J Am Vet Med Assoc. 1994 May 1;204(9):1354-60. PMID: 8050971. 4. Kollias NS, Strand EB, Kogan LR, Houlihan KE, Thompson-Iritani S, Hoenig DE, Ng ZY, Hart LA. Psychological implications of humane endings on the veterinary profession. J Am Vet Med Assoc. 2023 Jan 23;261(2):185-192. doi: 10.2460/javma.22.06.0234. PMID: 36701216. 5. Hurn S, Badman-King A. Care as an Alternative to Euthanasia? Reconceptualizing Veterinary Palliative and End-of-life Care. Med Anthropol Q. 2019 Mar;33(1):138-155. doi: 10.1111/maq.12494. Epub 2019 Feb 27. PMID: 30811651. 6. Bubeck MJ. Justifying Euthanasia: A Qualitative Study of Veterinarians' Ethical Boundary Work of "Good" Killing. Animals (Basel). 2023 Aug 4;13(15):2515. doi: 10.3390/ani13152515. PMID: 37570322; PMCID: PMC10416879. |
| <p>Other e.g., tutorials, online parts, hands-on visits, guest experts, etc. Training manuals, practical visits, invited experts</p> |

6.3. Organisation of the sub-topic

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|---|---------------------------------|---------------------|--|------------------------------|
| ECTS-marks 0,3 | Semester Week Hours 4 | Grouping/ No | Recommended academic semester LNUVMB: 204 – 3; 211 - 3 PSAU: 204 – 3; 211 - 3 NUBiP: 204 - 2 V. Dahl EUNU: 204 – 1; 211 – 3 | Language Ukrainian |
| Workload 0,3 ECTS-mark x 30 hours = 9 hours, with the following distribution | | | | |



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| Lectures 2 hours / 22% | Practical Tasks/Group work 4 hours /45% | Preparation/ follow up/ self-study 3 hours /33% |
|----------------------------------|---|---|

***Parts 6.1.–6.3. copy and paste X times, depending on the number of module subtopics**