University of Life Sciences "Ion Ionescu de la Brad" Iaşi
Faculty: Veterinary Medicine
Specialty: Veterinary Medicine

Dean,
Prof. dr. Mihai Mareş

SUBJECT OUTLINE

1. Information on the programme

1.1. Higher education institution	University of Life Sciences of Iasi
1.2. Faculty	Faculty of Food and Animal Science
1.3. Department	Fundamental Sciences in Animal Husbandry
1.4. Field of study	Veterinary Medicine
1.5. Cycle of study[1]	Bachelor and Master (unitary study programme)
1.6. Specialisation/ Study programme	Veterinary Medicine
1.7. Form of education	Full time

2. Information on the discipline

2.1. Name of the discipline	Animal Production							
2.2. Course coordinator				Assoc. Prof. PhD Daniel SIMEANU				
2.3. Seminar/ laboratory/ project coordinator				Assoc. Prof. PhD Daniel SIMEANU				
2.4. Year of study	II	2.5. Semester	4	2.6. Type of evaluation	Colloquium	2.7. Discipline status	Content[2]	AP
							Compulsoriness[3]	CD

3. Total estimated time (teaching hours per semester)

3.1. Hours per week – full time programme	4	out of which: 3.2. lecture	2	3.3. seminar/ laboratory/ project	2
3.4. Total number of hours in the curriculum	56	Out of which: 3.5. lecture	28	3.6. seminar/laboratory	28

Distribution of the time allotted	hours
3.4.1. Study based on book, textbook, bibliography and notes	10
3.4.2. Additional documentation in the library, specialized electronic platforms and field	6
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays	6
3.4.4. Tutorials	8
3.4.5. Examinations	4
3.4.6. Other activities	

3.7. Total hours of individual study	34
3.8. Total hours per semester	90
3.9. Number of credits[4]	3

4. Prerequisites (is applicable)

4.1. curriculum-related	Animal raising, Animal nutrition and agronomy
4.2. skills-related	

5. Conditions (if applicable)

5.1. for the lecture	The course is interactive; students can ask questions regarding the content of the presentation. Students will not attend lectures, seminars / labs with mobile phones on. Also, telephone conversations during the course will not be tolerated, nor will students leave the classroom to answer to phone calls. The students delay to the lectures will not be tolerated as it proves to be disruptive to the educational process.
5.2. for the seminar/ laboratory/ project	At practical work is required to study the materials previously presented; the students will conduct an individual or group activity using the provided laboratory materials. The students delay to the seminars will not be tolerated as it proves to be disruptive to the educational process. The deadline for the seminar project is set by the professor in agreement with the students. Any request to postpone will not be accepted for reasons other than objective ones. Also, for the late submission of the seminar / laboratory projects, there will be a downgrade with 1 point / day of delay.

6. Specific competences acquired

Professional competences	For the students, Animal production study provides: - understand the ethical and legal responsibilities of the veterinarian in relation to animals under his/her care, the environment, clients, policies and society -demonstrate an ability of lifelong learning and a commitment to learning and professional development. This includes recording and reflecting on professional experience and taking measures to improve performance and competence; -studying the factors that have an influence on the animal production from quantitative and qualitative point of view and directing them in order to obtain low-price, good quality and healthy products; - the description of the most efficient animal management technologies to ensure the animal production performance, competitiveness, rhythmicity and safety; - knowledge of the animal production control methods in order to improve and preserve them, but also for technological and economic purpose.
Transversal competences	-concern for professional development by critical thinking skills training; -demonstrate ability to cope with incomplete information, deal with contingencies, and adapt to change -work effectively as a member of a multi-disciplinary team in the delivery of services; -involvement on the specific activities of the discipline, such as articles and specialised studies writing; -scientific projects participation, compatible with the requirements of European education integration.

7. Course objectives (based on the list of competences acquired)

7.1. Overall course objective	Awareness of the role and responsibility of the specialist in animal science.
7.2. Specific objectives	- knowledge of animal management; - knowledge of the techniques of quantitative and qualitative assessment of animal production.

8. Contents

8.1. LECTURE Number of hours – 28	Teaching methods	Notes
MILK PRODUCTION I.1. Milk production; the herd dynamics on ownership structure; the dynamics of milk production on category I.2. Organoleptic, physico-chemical and nutritional properties of raw milk I.3. Factors which influence the milk production I.4. Milk cattle maintenance and breeding technology: dairy cow maintenance technology; elements and parameters of technological comfort for dairy cows in different breeding systems. Cows milking I.5. Technology of maintenance and raising sheep and goats for milk MEAT PRODUCTION II.1. Meat production in Romania; the herd dynamics on ownership structures; the dynamics of meat production on category II.2. Organoleptic, physico-chemical and nutritive particularities of meat obtained from different domestic species II.3. Factors which influence the meat production II.4. Methods and technologies for animal maintenance II.5. Livestock requirements and assessment methods raised for meat II.6. The transport animals to the slaughterhouse II.7. Methods, criteria and indexes for the carcass evaluation EGG PRODUCTION III.1. Physical, chemical and nutritional properties of eggs III.2. Factors which influence the egg production III.3. Methods and technologies used to maintain the egg production for consumption poultry III.4. General technological flow and management of egg collection, sorting, storage	Lecture; interactive dialogue with students; PPT presentation	A two-hour lecture weekly

III.5. Industrialisation, capitalisation and individual labelling of eggs WOOL PRODUCTION IV.1. Wool importance; wool marketing IV.2. Follicle morphogenesis and structure of the coating; the morphological structure of the wool, its quality characteristics; the assessment of the wool properties IV.3. Factors which influence the wool production IV.4. Wool faults and its preventing and correcting possibilities IV.5. Methods and technologies for wool sheep maintenance; Sheep shearing SKIN AND FUR PRODUCTION V.1. Importance and trends in leather and fur production V.2. General characteristics of skins and furs V.3. Criteria for the assessment and sorting of leather and fur skins APICULTURE PRODUCTION VI.1. Organoleptic, physical and chemical properties of apiculture products VI.2. Honey collection and extraction VI.3. Honey conditioning, packaging and storage to the manufacturer. Honey delivery and quality conditions VI.4. Collecting, extracting and conditioning of the wax in the apiary. Wax delivery and quality conditions VI.5. Collecting, conditioning and delivering of the propolis. Its quality conditions VI.6. The royal jelly and the pollen: collection and preservation Sericulture production VII.1. Characteristics of silk cocoon and fibres VII.2. Cocoon harvesting, storing and delivery		

8.2. PRACTICAL WORK Number of hours – 28 1.Milk production control to cows for selection 2.Milk production control for technological and economic purposes 3.Bovine technologies applied for milk production 4.Milk production control to sheep and goat 5.Meat production control to cattle 6.Meat production control to sheep 7. Pork meat evaluation 8.Body condition scoring to beef cattle 9.Body condition scoring to dairy cattle 10.Body condition scoring to sheep and pig 11. Body condition scoring to horses 12.Control of egg production and hatching physical factors 13.Sheep evaluation for the production of wool and skins 14.Equipment used for collecting and conditioning the bee products. Practical work in the apiary.	Theoretical presentation of the practical work, followed by interactive discussions based on the approached theme Farm visits Visit to ANZ Visit to apiary	A 2-hour session weekly

Compulsory bibliography:

1. Electronic course and practical work support -- PPT presentation

Optional bibliography:

Asma Khan, B. Brahma, Dipanjali Konwar, Manpreet Kour - Livestock Production Management a Practical Manual. As Per VCI Syllabus 2016
Banerjee G.C. - A Textbook of Animal Husbandry 8Ed, 2019
Field Thomas, Robert Taylor – Scientific Farm Animal Production, Pearson Publishing Company, 2016
Victor Roy Squires, Wayne L. Bryden - Livestock: Production, Management Strategies and Challenges. Nova Publishing Company, 2019
W. Stephen Damron, W. Damron - Introduction to Animal Science: Global, Biological, Social and Industry Perspectives (What's New in Trades & Technology) 6th Edition. Pearson Publishing Company, 2017

9. Coroborating the course content with the expectations of the epistemic community representatives, of the professional associations and of the relevant employers in the corresponding field

- In order to outline the content of the discipline and the teaching / learning method, the professors organized a meeting with the Romanian Society of Animal Husbandry members, the representatives of some specialised companies from the north-eastern part of Romania, as well as other professors in the field of Animal Production., from other higher education institutions (USAMV Cluj Napoca, USAMV Timișoara, USAMV Bucharest).
- The meeting aimed to identify the employers' requirements in the field of animal husbandry as well as harmonisation with other similar programs from other higher education institutions.

10. Assessment

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Lecture	Knowledge of animal husbandry technologies for the production of milk, meat, eggs, wool, skins Knowledge of beekeeping and sericulture technologies The notions assimilated during the lectures will be evaluated writing in the exam session.	MCQ test	70 %
10.5. Seminar/Laboratory	Knowledge of animal production evaluation techniques.	MCQ test	30 %
10.6. Minimum performance standards			
Knowing the animal husbandry technologies used for milk and meat production			

1 Cycle of studies- choose of the three options: Bachelor/Master/Ph.D.
2 Discipline status (content)- for the undergraduate level, choose one of the options:- FD (fundamental discipline), BD (basic discipline), CS (specific disciplines-clinical sciences), AP (specific disciplines-animal production), FH (specific disciplines-food hygiene), UO (disciplines based on the university's options).
3 Discipline status (compulsoriness)- choose one of the options – CD (compulsory discipline) OD (optional discipline) ED (elective discipline).
4 One credit is equivalent to 25-30 hours of study (teaching activities and individual study).

Course coordinator
Assoc. Prof. PhD Daniel SIMEANU

Laboratory work/seminar coordinator
Assoc. Prof. PhD Daniel SIMEANU

Date
14.09. 2021

Head of the Department
Assoc. Prof. PhD Daniel SIMEANU

17.09.2021

Approved by Faculty Council