



DISCIPLINE	Special Topics - Management of Avian Species					
CODE	DZO4241					
LEVEL	Mestrado e Doutorado					
TIME	45					
CREDIT NUMBER	THEORIC:	3	PRATIC:	0	Total:	3

EMENTA

Avian Management course provides a comprehensive overview of poultry industry, emphasizing key aspects such as hatching egg production, hatchery operations, feed production, poultry management, processing, economics, bio-security, and health management. The course also explores the historical development of the poultry industry, both in the United States and Brazil.

PROGRAMA

1. Introduction to Poultry Science: Definition of poultry science, main species, and role in food production and One Health. Key performance concepts (growth, FCR, mortality) and basic terminology.
2. Over view of Commercial Poultry Industry and Niches: Poultry chain organization from breeders to processing.
3. Conventional production versus niche and specialty markets and economic drivers.
4. Approaches Common to Different Poultry Types: Management, biosecurity, and monitoring principles shared by all poultry types. Integrated planning, performance recording, and health programs.
5. Poultry Behavior, Stress and Welfare: Main natural behaviors and housing effects on expression. Types of stress, welfare indicators, and strategies to improve welfare.
6. Poultry Management: Daily flock routines, brooding management, and environmental control. Importance of SOPs, inspection, and systematic record-keeping.
7. Fundamentals of Poultry Nutrition; Feeds and Feeds tuff; Poultry Feeding Standards: Poultry digestion and nutrient use; feed classification. Ration formulation based on standards and key nutritional strategies.
8. Poultry Housing and Equipment: Main design and environmental control requirements for poultry houses. Equipment choice and layout effects on welfare, productivity, and labor.
9. Poultry Incubation: Egg handling, incubation conditions, and embryo development. Hatchery management and biosecurity linked to chick quality and hatch ability.
10. Diseases and Health of Poultry: Major diseases, prevention, and control. Vaccination, biosecurity, diagnostics, and prudent drug use.
11. Poultry Genetics and Breeding: Goals and tools of genetic improvement in poultry. Selection for performance, robustness, and related welfare issues.
12. Broiler Chicken and Chicken Meat: Broiler production from placement to slaughter. Management linked to carcass yield, meat quality, and broiler-specific welfare issues.
13. Animal Waste and Other Impacts/Food Safety: Manure and litter management and environmental impact. On-farm practices related to microbial safety, residues, and regulations.
14. Layers and Eggs: Pullet rearing, layer flock management, and egg production. Factors affecting egg quality, handling, and safety.
15. Turkeys and Turkey Meat/ Ducks and Exotic Poultry: Specific management and nutrition needs of turkeys, ducks, and minor species. Particular health, welfare, and market characteristics.

BIBLIOGRAFIA

- AUSTRALIA. Department of Agriculture, Fisheries and Forestry. National farm biosecurity manual–poultry production. Canberra: Department of Agriculture, Fisheries and Forestry, 2009.
- BUTTER WORTH, A. et al. On-farm broiler welfare assessment and associated training. *Brazilian Journal of Poultry Science*, v. 15, n. 2, p. 111120, 2013.
- CHEEKE, P.R. Applied animal nutrition, feeds and feeding: feeds and feeding. 2.ed. Upper Saddle River: Pearson Education do Brasil, 1999. 525 p.
- CHEEKE, P.R.; DIERENFELD, E. Comparative animal nutrition and metabolism. Cambridge, MA: CABI, 2010. 339 p.
- DAWKINS, M.S. Chickens: the animal and their industry. Cambridge: Polity Press, 2015.
- ETCHES, R. J. Reproduction in poultry. Wallingford: CAB International, 1996.
- EUROPEAN FOOD SAFETY AUTHORITY. Scientific opinion on the welfare of broilers on farm. *EFSA Journal*, v. 21, n. 1, p. 7678, 2023.
- FOOD AND AGRICULTURE ORGANIZATION. Biosecurity for highly pathogenic avian influenza: issues and options. Rome: FAO, 2007. (FAO Animal Production and Health Manual, n. 7).
- GASS, G. H.; KAPLAN, H. M. Handbook of endocrinology. Boca Raton, FL: CRC Press, 1982. 357 p.
- JOHNSON, L. R. Physiology of the gastrointestinal tract. New York: Raven Press, 1987. v. 1 e 2. v. 1: 1909 p.; v. 2: 9101800 p.
- LEESON, S.; SUMMERS, J.D. Commercial poultry nutrition. 3.ed. Nottingham: Nottingham University Press, 2005.
- MAY, K.D. Poultry management: from farm to table. Amsterdam: Elsevier Academic Press, 2021.
- NATIONAL RESEARCH COUNCIL. Nutrient requirements of poultry. 9th rev.ed. Washington, DC: National Academies Press, 1994.
- PROSSER, C.L. Environmental and metabolic animal physiology. 4.ed. New York: Wiley-Liss, 1991. 1578 p.
- SCANES, C.; DRIDI, S. *Sturkie's avian physiology*. 7.ed. London: Academic Press, 2022. 1409 p.
- WELFARE QUALITY CONSORTIUM. Welfare Quality assessment protocols for poultry (broilers and layers). Lelystad: Welfare Quality, 2009.
- WISEMAN, J.; GARNSWORTHY, P. C. (ed.). Recent developments in poultry nutrition. Nottingham: Nottingham University Press, 1999.
- Journals:
Journal of Dairy Science - <https://www.journalofdairyscience.org/>
Poultry Science - <https://www.sciencedirect.com/journal/poultry-science>
Animal - <https://www.mdpi.com/journal/animals>
Journal of Animal Physiology and Animal Nutrition - <https://onlinelibrary.wiley.com/journal/14390396>

METODOLOGIA

Classes will take place in a virtual Google meeting environment, with each class lasting 3 hours of interaction between teacher and students, according to the course schedule. The synchronous meetings will be divided into traditional classes (lecture-dialog) followed by moments of discussion, clarification of doubts and interaction between students and teachers. Activities to prepare for the classes, such as references for reading, videos or similars will be sent in advance via e-mail or Google Classroom space.

CRITÉRIO DE AVALIAÇÃO

The evaluation will be continuous and integrative, assessing both conceptual appropriation and the communicative skills.

Individual Class participation (weight:50%): Relevant interventions, contributions to discussions and analysis.

Oral presentation (50%): presentation of a subject related to the syllabus.

Aprovada em reunião do Conselho acadêmico do
PPZ em 09/02/2026, conforme ata 01/26-PPZ.