

Diseases of Poultry (G000846)

Course size (nominal values; actual values may depend on programme)

Credits 4.0

Study time 120 h

Course offerings in academic year 2024-2025

A (Year)

English

Gent

Lecturers in academic year 2024-2025

De Gussem, Maarten

D105

staff member

Van Meirhaeghe, Hilde

D104

staff member

Antonissen, Gunther

D102

lecturer-in-charge

Garmyn, An

D105

co-lecturer

Geldhof, Peter

D104

co-lecturer

Van Immerseel, Filip

D105

co-lecturer

Offered in the following programmes in 2024-2025

[Postgraduate in Poultry Health Sciences\(main subject Asia\)](#)

crdts 4

offering A

[Postgraduate in Poultry Health Sciences\(main subject Europe\)](#)

4

A

[Postgraduate in Poultry Health Sciences\(main subject Latin America\)](#)

4

A

Teaching languages

English

Keywords

bacterial diseases, fungal diseases, infectious diseases, non-infectious diseases, parasitic diseases, viral diseases, toxicology

Position of the course

The goal of this course is to provide a comprehensive overview of all types of poultry diseases, including etiology, epidemiology, pathogenesis, symptoms & lesions, diagnosis, treatment and prevention of the major infectious and non-infectious diseases in poultry.

Contents

Bacterial & Fungal diseases: In this section the etiology, epidemiology, pathogenesis, symptoms & lesions, diagnosis, treatment and prevention of the major bacterial and fungal diseases in poultry are discussed, such as *Salmonella* infections, campylobacteriosis, colibacillosis, pasteurellosis and other respiratory bacterial infections (fowl cholera, *Riemerella anatipestifer*, *Ornithobacterium rhinotracheale*, bordetellosis), infectious coryza and related bacterial infections mycoplasmosis, clostridial diseases (ulcerative enteritis, necrotic enteritis, botulism, gangrenous dermatitis), staphylococcosis, *Streptococcus* and *Enterococcus*, erysipelas, avian intestinal spirochetosis, tuberculosis, avian chlamydiosis, and aspergillosis.

Viral diseases: In this section the etiology, epidemiology, pathogenesis, symptoms & lesions, diagnosis, treatment and prevention of the major viral diseases in poultry are discussed, such as Newcastle disease, other avian paramyxoviruses, and avian metapneumovirus infections, infectious bronchitis, infectious laryngotracheitis, influenza, infectious bursal disease, chicken infectious anemia and circovirus infections, adenovirus infections, pox, avian reovirus infections, viral enteric infections (coronavirus, rotavirus, astrovirus, avian-enterovirus-like virus, parvovirus), viral infections of waterfowl (a.o. hepatitis, duck virus enteritis, parvovirus, hemorrhagic nephritis enteritis of geese), and neoplastic

diseases (Marek's disease, leukosis, reticuloendotheliosis).

Parasitic diseases: In this section the etiology, epidemiology, pathogenesis, symptoms & lesions, diagnosis, treatment and prevention of the major parasitic diseases in poultry are discussed, such as coccidiosis, cryptosporidiosis, histomoniasis (Blackhead), roundworms, tapeworms, ectoparasites (a.o. mites, lice, and ticks).

Non-infectious diseases: In this section the etiology, epidemiology, pathogenesis, symptoms & lesions, diagnosis, treatment and prevention of the major non-infectious diseases in poultry are discussed, such as nutritional diseases, developmental disorders, metabolic diseases, mycotoxicosis, PCBs and dioxins, drug toxicity in poultry, toxic gases in poultry houses.

Initial competences

A thorough knowledge of the avian embryology, anatomy, physiology, immunology, breeding and genetics as taught in G000842 and poultry nutrition as taught in G000844 is a prerequisite. Besides sufficient knowledge of avian pharmacology, toxicology, vaccinology and epidemiology is a prerequisite. Simultaneous enrollment for these courses, apart from having obtained a credit or exemption, is considered sufficient.

Final competences

- 1 Knowledge and insights in the etiology, epidemiology, pathogenesis, symptoms & lesions, diagnosis, treatment and prevention of major infectious and non-infectious diseases in poultry.
- 2 Be able to develop a differential diagnosis based on an anamnesis, clinical symptoms and macroscopic lesions.
- 3 Be able to develop a diagnostic plan based on anamnesis, clinical symptoms and lesions.
- 4 Gained practical experience in how to do a dissection and how to recognize and identify the common gross pathological lesions as opposed to normal anatomical structures.
- 5 Being capable to understand the different links between lesions in different organs, as a first step in understanding the pathologic basis of disease.
- 6 Know the essentials of the development of an appropriate treatment and prevention plan.
- 7 Show capacity to reason logically when solving disease problems.
- 8 Communicate results from diagnostic investigations in a clear and concise manner to lay persons, such as farmers.
- 9 Knowledge on zoonotic diseases should permit the student to discuss with farmers, veterinarians, physicians, government employees involved in food safety the possible risks of poultry diseases to humans.
- 10 To know the etiology, toxicity, toxicokinetics, pathogenesis, symptoms and lesions of intoxications of poultry.
- 11 To understand a correct sampling strategy and analysis of samples to confirm a toxicological diagnosis.

Conditions for credit contract

This course unit cannot be taken via a credit contract

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Clinic, Seminar, Lecture, Independent work

Extra information on the teaching methods

The course consists of instructor-led and facilitated e-learning (36.25h), clinical seminar (24), and clinics (24h).

Practical exercises of the postgraduate Poultry Health Sciences are offered in enterprises in situ though, within periods of one week twice per academic year (first and second year of the programme) resp. once per academic year (third year of the programme). For the European program the practical courses will be organised in Belgium (Merelbeke, Izegem and Poeke); for the Asian program they will be organised alternately in Thailand (Bangkok)/the Philippines (Manilla); for Latin American program they will be organised in Brasil (Sao Paulo).

Study material

None

References

Diseases of Poultry, 14th Edition, by David E. Swayne, Martine Boulianne, Catherine M. Logue, Larry R. McDougald, Venugopal Nair, David L. Suarez (Eds.)

Course content-related study coaching

E-mentoring by the lecturers will provide support and feedback at class and individual level through online tools; possibility to discuss some problems with the lecturer-in-charge or one of the co-lecturers during the practical courses.

Assessment moments

end-of-term and continuous assessment

Examination methods in case of periodic assessment during the first examination period

Oral assessment, Written assessment with multiple-choice questions, Written assessment with open-ended questions

Examination methods in case of periodic assessment during the second examination period

Oral assessment, Written assessment with multiple-choice questions, Written assessment with open-ended questions

Examination methods in case of permanent assessment

Skills test, Participation

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible in modified form

Extra information on the examination methods

A: Periodic evaluation: There is a part of the written examination with open questions with an oral defence, and a part of the written examination with multiple choice questions. The theory and practical examples discussed in the e-lessons and practical sessions form the content of this examination.

Periodic evaluation in the first-term examination period will be organised onsite in the period May 1st - June 30th. For the postgraduate Poultry Health Sciences module Europe first-term examination will be organized in Merelbeke (Belgium), for the module Asia in Bangkok (Thailand), for the module Latin America (Sao Paolo).

Periodic evaluation in the second-term examination period will be organized in the period August 1st - September 15th in Merelbeke (Belgium) for all modules.

B: Permanent evaluation: participation, motivation, dedication and skills of the student during the practical exercises.

Calculation of the examination mark

Periodical examination: 90%

Permanent evaluation: 10%

Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.