

Digestive Physiology of Animals (I700236)

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

Credits 5.0 **Study time 150 h**

Course offerings and teaching methods in academic year 2025-2026

A (semester 1)	Dutch	Gent	lecture seminar
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Lecturers in academic year 2025-2026

Ingels, Katrijn	LA22	staff member
Fievez, Veerle	LA22	lecturer-in-charge
Van Hecke, Thomas	LA22	co-lecturer

Offered in the following programmes in 2025-2026

	crdts	offering
Master of Science in Bioscience Engineering Technology: Agriculture and Horticulture (main subject Plant and Animal Production)	5	A

Teaching languages

Dutch

Keywords

Zootechnics, digestive physiology, feed resources

Position of the course

This course provides in-depth insight into the digestive physiology of farm animals, with a focus on its application in practical livestock management. Building on prior knowledge from the courses 'Zoology: Morphology and Systematics' and 'Animal Physiology', this course examines the physiological basis of digestion at the animal, tissue, and cellular levels.

The dynamic interactions between digestive and endocrine processes are discussed in an integrated manner, including the processing of nutrient flows in the liver. Students learn to connect these processes to practical applications, such as the selection of feed ingredients and rations for various animal species, strategies to ensure animal health and welfare, and measures to reduce environmental impact. The emphasis is on integrative thinking, serving as direct preparation for the specialized and applied courses 'Ruminant and Pig Nutrition' and 'Poultry Nutrition and Management.'

Contents

Introduction *Digestion: The basis for nutrient supply and physiological processes*
Chapter 1: *Anatomy of the Digestive System*
Chapter 2: *Functioning of the Digestive System*
Chapter 3: *Nutrient Digestion*
Chapter 4: *Nutrient Absorption*
Chapter 5: *Nutrient Metabolism in the Liver*
Chapter 6: *Feed Intake and Feed Intake Regulation*
Chapter 7: *Feed Composition and Evaluation*
Chapter 8: *Methods for Digestive Physiology Research*

Initial competences

This course builds on certain learning outcomes of the course units 'Zoology: Morphology and Systematics' and 'Animal Physiology' or the learning outcomes have been achieved differently.

Basic knowledge of organic chemistry and biochemistry is required.

Final competences

- 1 Having knowledge and understanding of the anatomical, endocrine, and physiological processes that directly or indirectly regulate digestion in farm animals.
- 2 Scientifically linking anatomical, physiological, and hormonal processes regulating digestion in animals to the selection of feed ingredients.
- 3 Addressing practical issues related to the digestion in animals and the suitability of various feedstuffs in their diets.
- 4 Advising on practical preventive measures to reduce or prevent disorders of the digestive system or its physiology.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Seminar, Lecture, Practical, Independent work

Extra information on the teaching methods

After a introduction and demonstration, students must train themselves to be able to recognize feed components.

Students are trained to gain insight in digestibility and nutritional value

Study material

Type: Syllabus

Name: Course notes and slides Verteringsfysiologie

Indicative price: Free or paid by faculty

Optional: no

Language : Dutch

Available on Ufora : Yes

References

extensive list of references in course notes

Course content-related study coaching

Permanent opportunity to ask questions and communications via email.

Assessment moments

end-of-term and continuous assessment

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

Oral assessment, Written assessment

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

Oral assessment, Written assessment

Examination methods in case of permanent assessment

Assignment

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

Theory: Oral examination with written preparation

Reports on the exercises are scored. Students are finally tested on their knowledge about the exercises.

Calculation of the examination mark

Theory: 80%

Exercises: 20%

Students need to participate to all exams/assignments to succeed; for the aspects of permanent as well as non-permanent evaluation. The end assessment is a weighted average of the of the two subscores: 80% oral exam, 20% personal work (exercises).

If a subscore is less than 8/20 (not rounded-off), it is not possible to pass this course. In this case, if the weighted score is 10 or more, the final score will be 9/20.

