



Cursusomvang (nominale waarden; effectieve waarden kunnen verschillen per opleiding)

Studiepunten 5.0 Studietijd 135 u Contacturen 60.0 u

Aanbodsessies en werkvormen in academiejaar 2018-2019

| | | | |
|----------------|--------|------------------------------------|---------|
| A (semester 1) | Engels | practicum | 21.25 u |
| | | begeleide zelfstudie | 11.25 u |
| | | werkcollege: PC- klasoefeningen | 3.75 u |
| | | hoorcollege | 23.75 u |

Lesgevers in academiejaar 2018-2019

| | | |
|----------------|------|---------------------------|
| Fievez, Veerle | LA22 | Verantwoordelijk lesgever |
|----------------|------|---------------------------|

Aangeboden in onderstaande opleidingen in 2018-2019

| | | |
|--|-------|--------------|
| Master of Science in Nutrition and Rural Development (afstudeerrichting Tropical Agriculture) | stptn | aanbodsessie |
| | 5 | A |

Onderwijstalen

Engels

Trefwoorden

Digestion physiology, production physiology, reproduction

Situering

Starting objectives of this course are principles covered by the course 'Zoology 2: vertebrates'. The current course aims at providing insight in the most important aspects of animal production in terms of digestion, metabolism (maintenance, lactation, growth) and reproduction. Emphasis will be put on the description of the physiological background of these processes at the animal, tissue/organ and cell level. Biological/physiological background is put in the frame of their importance in relation to animal production.

Inhoud

PART A - NUTRIENT FLUXES

I. Digestion & absorption

- I.1. Morphology of the digestive tract
- I.2. Rumen: digestion & nutrient absorption
- I.3. Stomach: digestion
- I.4. Small intestine: digestion & nutrient absorption
- I.5. Large intestine: digestion & nutrient absorption
- I.6. Quantification of digestion in different parts of the digestive tract

II. Transport & intermediate metabolism

- II.1. Transport end products fat digestion
- II.2. Liver metabolism

III. Nutrient metabolism in splanchnic and peripheral tissues

- III.1. Splanchnic tissues
- III.2. Peripheral tissues: mammary gland, muscle and adipose tissue

PART B - INTERACTION WITH ENDOCRINE AND PARACRINE SYSTEM

I. Regulation voluntary feed intake

II. Reproduction

III. Pre-natal muscle growth

IV. Post-natal growth

V. Lactation

PART C - GENE EXPRESSION

I. Introduction

II. Mutations related to animal production biology

III. Interaction between gene expression and the environment: epigenetics & nutrigenomics

Begincompetenties

The students has general, basal knowledge on animal physiology and biology of birds and mammals.

Eindcompetenties

- 1 The student has a profound knowledge on physiological aspects concerning digestion, lactation, growth and reproduction and is capable of applying this knowledge to interpret results of laboratory analysis.
- 2 The student understands the importance of these physiological aspects in relation to production and reproduction of farm animals.
- 3 The student gets insight in new biotechnological developments in animal production. These contribute to form ethically- and socially-founded value judgments.

Creditcontractvoorwaarde

Toelating tot dit opleidingsonderdeel via creditcontract is mogelijk mits gunstige beoordeling van de competenties

Examencontractvoorwaarde

Dit opleidingsonderdeel kan niet via examencontract gevolgd worden

Didactische werkvormen

Begeleide zelfstudie, hoorcollege, practicum, werkcollege: PC-klasoefeningen

Toelichtingen bij de didactische werkvormen

Theory: oral lectures, during which also some example calculations are made plenary. Exercises are mainly practical laboratory exercises. One exercise is a computer exercise.

Personal study ('Begeleide zelfstudie') mainly concerns personal preparation of lectures and practical exercises based on notes which are made available to the students by the lecturer.

Leermateriaal

Course material is available. Geraamde totaalprijs: 15 EUR

Referenties

Diverse literature sources (reference books on animal nutrition & digestive tract, physiology, genetics & recent publications)

Vakinhoudelijke studiebegeleiding

The teaching staff (professors) can be contacted during contact hours to solve questions. Teaching assistants can be contacted concerning exercises.

Evaluatiemomenten

periodegebonden evaluatie

Evaluatievormen bij periodegebonden evaluatie in de eerste examenperiode

Schriftelijk examen met open vragen, mondeling examen

Evaluatievormen bij periodegebonden evaluatie in de tweede examenperiode

Schriftelijk examen met open vragen, mondeling examen

Evaluatievormen bij niet-periodegebonden evaluatie

Verslag

Tweede examenkans in geval van niet-periodegebonden evaluatie

Examen in de tweede examenperiode is mogelijk

Toelichtingen bij de evaluatievormen

Theory: period aligned evaluation (80%)

Exercises: period aligned (20%)

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

Theory: written (1 question) and oral examination (3 questions)

Exercises: 1 question concerning exercises, to solve during the written exam, no additional oral examination

Eindscoreberekening

Practical exercises: 20/100, Theory: 80/100

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