UNIVERSITEIT GENT

Studiefiche

Vanaf academiejaar 2017-2018

Animal Nutrition (I000586)

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 2)	Engels	werkcollege: PC-klasoefeningen	3.75 u
		demonstratie	5.0 u
		zelfstandig werk	3.75 u
		werkcollege: geleide oefeningen	8.75 u
		hoorcollege	23.75 u
		excursie	8.75 u
		begeleide zelfstudie	6.25 u

Lesgevers in academiejaar 2018-2019

Fievez, Veerle	LA22	Verantwoordelijk lesgever
Michiels, Joris	LA22	Medelesgever

Aangeboden in onderstaande opleidingen in 2018-2019	stptn	aanbodsessie
Master of Science in Nutrition and Rural Development (afstudeerrichting Tropical Agriculture)	5	A
Master of Science in de bio-ingenieurswetenschappen: landbouwkunde	5	A
Uitwisselingsprogramma bio-ingenieurswetenschappen: landbouwkunde (niveau master- na- bachelor)	5	A
Uitwisselingsprogramma bio-ingenieurswetenschappen: Food Science and Nutrition (niveau master-na-bachelor)	5	A

Onderwijstalen

Engels

Trefwoorden

Ruminant nutrition, pig nutrition, feed evaluation, requirements, diet formulation

Situering

The emphasis of this course is put on ruminant and pig nutrition. An introduction on poultry nutrition is given. In a first part, the course describes feeding standards in relation to the physiological processes (maintenance, labour, growth, lactation, pregnancy) from which feeding systems for the different classes of farm animals are derived. In a second part, emphasis is put on specific requirements and nutritional disorders in relation to the physiological (weaning, growth, early lactation, breeding) and metabolic status of the animal.

Inhoud

1. General aspects
1.1. Nutrient contents (macro nutrients, micro nutrients, energy)
1.2. Digestibility
1.3. Nutrient evaluation
1.3.1. Energy
1.3.2. Protein and amino acids
1.3.3. Vitamins and minerals
2. Ruminant nutrition
2.1. Energy evaluation system
2.2. Protein evaluation system

2.3. Specific requirements of dairy cattle: transition period and lactation peak
2.4. Physiological background of metabolic disorders and relation with nutrition
2.5. Milk metabolites and on-farm observations to support diet formulation
3. Pig nutrition
3.1. Energy evaluation system
3.2. Protein evaluation system
3.3. Specific requirements of sows (lactation, pregnancy, partus)
3.4. Specific requirements of piglets
3.5. Non-nutritive feed additives
4. Poultry nutrition - introduction
4.1. Overview of energy and protein evaluation system
4.2. Specific requirements of broilers
4.3. Specific requirements of laying hens
4.4. Specific requirements of breeders
5. Linear programming for diet formulation
6. Miscellanous hot topics
6.1. Feed additives: legislation, implementation & valorisation
6.2. Mycotoxins and solutions
6.3. Formulating functional feeds
6.4. Sensors in animal nutrition

Begincompetenties

Animal Nutrition bouwt verder op bepaalde eindcompetenties van opleidingsonderdeel Dierliike productiebiologie ; of de eindcompetenties werden op een andere manier verworven.

Eindcompetenties

1 The student has a profound knowledge in determination of nutrient content and evaluation.
2 Animal species specific energy and protein evaluation systems are known.
3 The student is able to calculate requirements according to the production stage and level.
4 The basis of linear programming is known.
5 The student is able to critically evaluate current feed evaluation systems and has some insight in new developments.
6 The student obtained insight in the origin of metabolic disorders and the functions of non-nutritive feed additives.

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, demonstratie, excursie, hoorcollege, zelfstandig werk, werkcollege: geleide oefeningen, werkcollege: PC-klasoefeningen

Toelichtingen bij de didactische werkvormen

Theory: oral lectures ('hoorcollege')
Feedstuff characteristics: personal collection of data for dairy cattle, gestating & lactating sows, piglets, broilers & laying hens ('begeleide zelfstudie') + discussion sessions & feedback on personally collected data
Exercises: demonstration in relation to feed evaluation, calculations in relation to energy and protein evaluation system & diet formulation (personal preparation ('zelfstandig werk') - preparation of the exercises + discussion sessions ('geleide oefeningen')), practical on farm evaluation of nutrition and production characteristics, pilot compound feed installation & premix company (excursions), compound feed formulation based on linear programming ('PC-klasoefeningen')

Leermateriaal

Course material is available. Geraamde totaalprijs: 20 EUR
Optional excursion to feed design lab (additional costs - to be determined)

Referenties

cfr. extensive list of references in the course material

Vakinhoudelijke studiebegeleiding

During the contact hours, the different topics are discussed under supervision of the lecturer. Exercises are prepared by the students based on guidelines provided by the lecturer.

Evaluatiemomenten

periodegebonden en niet-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

Mondeling examen, participatie, verslag

Tweede examenkans in geval van niet-periodegebonden evaluatie

Examen in de tweede examenperiode is enkel mogelijk in gewijzigde vorm

Toelichtingen bij de evaluatievormen

Theory: period aligned evaluation
Exercises: non-period aligned evaluation

Possibility for period aligned evaluation of exercises (agreement between lecturer and student).

Exercises: assessment of cooperation and interaction during exercises and excercise preparation reports

Eindscoreberekening

10/20 - non-period aligned evaluation
10/20 - period aligned evaluation