GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2026-2027

Aquaculture Nutrition (I002794)

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

Credits 5.0 **Study time 150 h**

Course offerings in academic year 2026-2027

A (semester 2) English Gent

Lecturers in academic year 2026-2027

Fievez, Veerle	LA22	lecturer-in-charge

Offered in the following programmes in 2026-2027	**crdts**	**offering**
Master of Science in Aquaculture	5	A
Exchange Programme in Bioscience Engineering: Agricultural Sciences (master's level)	5	A

Teaching languages

English

Keywords

Aquaculture, nutrition, food, feed.

Position of the course

The course covers a number of general and specific issues related to (non-live) feed requirements, feed characteristics, feed production, feeding practices in an aquaculture context.

Contents

1. Aquaculture feed ingredients, feed analysis, chemical and nutritive characteristics of feed ingredients
2. Aquaculture feed production technology
3. Nutritional requirements of aquaculture organisms
4. Efficiency of use of feed by aquaculture organisms: feed conversion ratio; fish-in/fish-out-ratio
5. Sustainability in feed production; alternative feed ingredients: potentials and challenges
6. Aquaculture feed formulation based on linear programming and aquaculture feed analysis
7. Excursion

Initial competences

General biology, chemistry, biochemistry and basic knowledge on aquaculture.

Final competences

1 The student is able to enumerate the main ingredients being used for aquaculture feeds, their advantages and disadvantages, and is able to critically evaluate tendencies within aquaculture nutrition with a focus on enhanced sustainability of rearing practices
2 The student is able to explain why an ingredient is suitable for the production of feeds in the aquatic environment.
3 The student understands which feed ingredients are necessary, and in which proportions, to compose a balanced diet depending on the species, the animal's physiological status and the rearing context
4 The student is able to describe how the organism takes advantage of the feed ingredients and how feed formulation is related to intake and digestion by the organism.
5 The student is able to describe the various methods for feed analysis and can

argue why they may be suitable in a scientific and/or an industrial production environment.

6 The student has insight into compound feed formulation based on linear programming

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, Excursion, Lecture, Practical, Independent work

Extra information on the teaching methods

Theory lectures: lectures based on powerpoint presentations and videos.
Exercises: online learning path on proximate feed analysis; lab excercise on fatty acid analysis; guided exercises on linear programming in feed formulation
Excursion: visit to feed production plant and to aquaculture facilities for digestion trials

Study material

Type: Slides

Name: Course notes including slides and text
Indicative price: Free or paid by faculty
Optional: no
Language : English
Available on Ufora : Yes

References

Course content-related study coaching

Lecturers are available during and after the classes.
Further study guidance upon request by email or on appointment.

Assessment moments

end-of-term 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

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

Period aligned evaluation: Period aligned evaluation: Between 5 to 8 questions; all questions make an equal contribution to the final score. The exam is a mix of questions with written preparation and oral explanation; written theory questions; calculation exercise; interpretation of linear programming case. The complete exam is closed book.
Non-period aligned evaluation: exercises and excursion: participation and report.

Calculation of the examination mark

Grading breakdown: 1/3 'General aspects of animal nutrition' (Veerle Fievez), 1/3 'Ingredients, aquafeeds and feeding practices' (guest lecturers), 1/3 'Exercises' (calculation & best mix) (Veerle Fievez)
Students that do not attend the practical or excursion without a valid reason, should retake the course the next academic year.Failure to submit the calculation assignment will result in a penalty on the exam score (-1).
Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.