Course Specifications
Valid as from the academic year 2020-2021

Aquaculture Nutrition (1002794)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Course size

<table>
<thead>
<tr>
<th>Credits</th>
<th>Study time</th>
<th>Contact hrs</th>
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<tbody>
<tr>
<td>5.0</td>
<td>150 h</td>
<td>50.0 h</td>
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</tbody>
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Course offerings in academic year 2020-2021

A (semester 2)  English  Gent

Lecturers in academic year 2020-2021

Van Stappen, Gilbert  LA22  lecturer-in-charge
Fievez, Veerle  LA22  co-lecturer

Offered in the following programmes in 2020-2021

| 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 and their characteristics
2. Aquaculture feed formulation
3. Aquaculture feed production technology
4. Nutritional requirements of aquaculture organisms
5. Efficiency of use of feed by aquaculture organisms: feed conversion ratio; fish-in/fish-out-ratio
6. Aquaculture feed analysis
7. Sustainability in feed production; alternative feed ingredients: potentials and challenges
8. 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 artificial aquaculture diet depending on the species 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

(Approved)
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
Guided self-study, demonstration, excursion, lecture, seminar: coached exercises

Extra information on the teaching methods
Theory lectures: lectures based on powerpoint presentations and videos.
Exercises: guided exercises on linear programming and demonstration on feed analysis.
Excursion: visit to feed production plant and to aquaculture facilities

Learning materials and price
Printout of the powerpoint presentation will be available during all classes.
Estimated cost of the printouts: 20 euro (included in fee that is paid in the beginning of
the academical year).

References

Course content-related study coaching
Study guidance upon request by email or on appointment.

Evaluation methods
end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period
Written examination

Examination methods in case of periodic evaluation during the second examination period
Written examination

Examination methods in case of permanent evaluation
Participation, report

Possibilities of retake in case of permanent evaluation
examination during the second examination period is possible

Extra information on the examination methods
Non-period aligned evaluation: exercises and excursion: participation and report.

Calculation of the examination mark
Out of 20:
20 points attributed to written exam

Students that do not attend the excursion without a valid reason, should retake the
course the next academic year.

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