GHENT UNIVERSITY

Course Specifications

Valid in the academic year 2024-2025

Principles of Marine Fish Larviculture (I002854)

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

Credits 3.0 **Study time 90 h**

Course offerings in academic year 2024-2025

Lecturers in academic year 2024-2025

Offered in the following programmes in 2024-2025	crdts	offering

Teaching languages

English

Keywords

Hatchery, fish larva, live food, larval nutrition, microdiet

Position of the course

The aim of this course is to give a general overview and principles of marine fish larviculture, focusing on nutritional and zootechnical aspects. Firstly, larval nutritional requirements in general are addressed. The different aquatic invertebrates that can be used as live food are highlighted, including their natural availability, general characteristics,culture techniques and fields of application in larviculture of mainly marine fish. Also developments in the field of microdiets are explained

Contents

1. Introduction to marine fish species larviculture: principles, techniques, past and present successes and bottlenecks, perspectives and current developments with focus on nutrition; crucial role of live food
2. Artemia biology, ecology and taxonomy and strain study; production of cysts and biomass; commercial aspects and quality control; Artemia applications in aquaculture
3. Production techniques and applications of rotifers and other zooplankton organisms
4. Larviculture of marine fish species: general feeding strategies and zootechnical aspects

Initial competences

General biology, chemistry, biochemistry

Final competences

1 The student has general knowledge on general principles of marine fish larviculture, such as techniques used, current developments and future perspectives
2 The student has in-depth knowledge on the nutritional aspects of marine fish larviculture: nutritional requirements; feeding behaviour; live food versus artificial diets
3 The student has detailed knowledge on various aspects of different live food organisms (rotifers, Artemia, other zooplankton organisms) used in larviculture, such as their advantages and restrictions, availability, production techniques and fields of application.
4 The student has general knowledge on Artemia biology, ecology and taxonomy

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

Lecture

Extra information on the teaching methods

Theoretical lectures based on power point presentations and with plenary exercises, followed by discussion rounds.

Study material

None

References

- *Manual on the Production and Use of Live Food for Aquaculture. FAO Fisheries Technical Paper no 361*
- *K. Hamre, M. Yúfera, I. Rønnestad, C. Boglione, L. Conceição, M. Izquierdo. 2013. Fish larval nutrition and feed formulation: knowledge gaps and bottlenecks for advances in larval rearing. Reviews in Aquaculture https://doi.org/10.1111/j.1753-5131.2012.01086.x*
- *L.Conceição, M. Yúfera, P. Makridis, S. Morais, M.T. Dinis. 2010. Live feeds for early stages of fish rearing https://doi.org/10.1111/j.1365-2109.2009.02242.x*

Course content-related study coaching

Study guidance upon request by email or on appointment

Assessment moments

continuous assessment

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

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

Examination methods in case of permanent assessment

Written assessment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

Previously announced written tests on specific parts of the course, spread throughout the semester. Second-chance by one single exam.

Calculation of the examination mark

All questions asked over the successive tests contribute evenly to the total end score

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