

## Applied Marine Fish Larviculture (I002855)

**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, Artemia, rotifer, cyst, quality control*

### Position of the course

*The aim of this course is to provide knowledge on practical applications of live food in marine fish larviculture. This is mainly achieved by a number of practical classes and hands-on exercises, related to the laboratory culture of fish larvae and the use of live food*

### Contents

1. Design and practical application of a larval fish feeding regime; assessment of fish larval performance
2. Quality control in live food commercial products, especially Artemia cysts
3. Methodologies for practical application of Artemia in hatcheries
4. Design and practical application of rotifer laboratory cultures

### Initial competences

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

### Final competences

- 1 The student is able to apply practical techniques related to the use of Artemia in larviculture (such as cyst decapsulation, nauplius enrichment, cyst quality control) and can report about them.
- 2 The student is able to run a rotifer batch culture and has insight into rotifer recirculation production systems, and can report about this.
- 3 The student is able to run a larval fish culture at laboratory scale, including aspects such as supply of artificial and live food (calculation of needed amounts of artificial and live food), zootechnical aspects including maintenance of recirculation system, analysis of parameters related to fish larval growth, and is able to report about this in a written report in the format of a scientific paper.

### 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

Group work, Lecture, Practical

### Extra information on the teaching methods

*Theoretical lecture introduces to a number of practicals, labworks and demonstrations, for which students are organized in groups (with individual report). Depending on the labwork (nature of work and duration of the test, e.g. prolonged fish larviculture test vs. short guided labwork), more or less independent working is required*

#### **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**

Participation, Assignment

#### **Possibilities of retake in case of permanent assessment**

examination during the second examination period is possible

#### **Extra information on the examination methods**

*Non-period related evaluation: individual reports of labworks/practicals (including a report in the format of a peer-reviewed paper); participation to labworks/practicals*

#### **Calculation of the examination mark**

*The various labwork/reports together contribute 100% of the total score, second chance exam constitutes an upgraded version of the reports  
Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.*