

## Mollusc and Crustacean Culture (I002791)

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

**Credits 5.0**

**Study time 150 h**

**Course offerings in academic year 2023-2024**

A (semester 2)

English

Gent

**Lecturers in academic year 2023-2024**

Declercq, Annelies

LA22

lecturer-in-charge

**Offered in the following programmes in 2023-2024**

[Master of Science in Aquaculture](#)

**crdts**

5

**offering**

A

[Exchange Programme in Bioscience Engineering: Agricultural Sciences \(master's level\)](#)

5

A

### Teaching languages

English

### Keywords

Culture techniques, biology of shellfish, abalone, oyster, mussel, scallop, clam, penaeids, prawn, lobster, crayfish, crab.

### Position of the course

The aim of this course is to teach culture techniques that are commonly applied for the commercial production of crustaceans and molluscs.

The course offers detailed knowledge on various mollusc and crustacean species. Practical classes on mollusc anatomy and freshwater shrimp development are included.

### Contents

Crustacean culture

1. General aspects on the production of crustaceans : maturation, reproduction, larval culture, grow-out, feeds
2. Production techniques for penaeid shrimp
3. Production techniques for freshwater prawn *Macrobrachium*
4. Production techniques for lobster
5. Exercise on a penaeid hatchery
6. Practicum identification different larval stages of *Macrobrachium*

Mollusc culture

1. World production of molluscs
2. Abalone culture
3. Anatomy of bivalves with practicum dissection
4. General aspects on the production of bivalves : life cycle, nutritional requirements in different life stages and environmental adaptations of bivalves
5. Exceptional species
6. Common hatchery and nursery systems for bivalves
7. Common grow-out systems for bivalves
8. Impact of bivalve culture on the environment
9. Diseases in cultured molluscs

### Initial competences

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

### Final competences

- 1 The student has knowledge on the biological requirements of crustaceans and molluscs in commercial production systems.

2 The student has technical knowledge on the rearing systems used for crustaceans and molluscs.

3 The student has insight into how to start a hatchery or grow-out farm for crustaceans.

4 The student is able to identify mollusc organs.

5 The student is able to identify different larval stages of freshwater prawn.

#### **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, Lecture, Practical, Independent work

#### **Extra information on the teaching methods**

Theory lectures: lectures based on powerpoint presentations and videos.

Practical classes: dissection of bivalves and identification of different larval stadia of *Macrobrachium*.

Exercises: exercise on the starting-up and exploitation of a shrimp hatchery.

#### **Learning materials and price**

Printouts of the powerpoint presentation will be available during all classes.

Estimated cost of the printouts: 17 euro (included in fee that is paid in the beginning of the academical year).

#### **References**

Hatchery culture of bivalves, by Michael Helm, FAO Technical paper 471

Farming freshwater prawns, by Michel New, FAO Technical paper 428

Crustacean farming, by John Wickins and Daniel O.C.Lee

#### **Course content-related study coaching**

Study guidance upon request by email or on appointment.

#### **Assessment moments**

end-of-term and continuous assessment

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

Written assessment

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

Written assessment

#### **Examination methods in case of permanent assessment**

Participation

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

examination during the second examination period is not possible

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

Period aligned evaluation: theory: written closed book exam.

Non-period aligned evaluation: practical classes and exercises: participation.

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

Out of 20:

14 points attributed to exam mollusc part

6 point attributed to exam crustacean part

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

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