

# Interuniversity Official Master's degree

# AQUACULTURE

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## General information

Coordinator university	Univ. Santiago de Compostela
Co-responsible universities	Univ. A Coruña and Univ. of Vigo
Teaching period	1,5 courses
Number of credits	90 ECTS
Number of offered vacancies	30 in total (10 in UVigo)

## Information in UVigo

Coordinator in the University of Vigo  
 José Luis Soengas  
 Faculty of Biology  
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## Structure (90 ECTS in 3 terms: 1.5 years)

For obtaining the degree of "**MASTER in AQUACULTURE**" the students will have to pass 90 credits ECTS: 30 credits ECTS of mandatory module + 30 credits ECTS of speciality subjects + 30 credits ECTS End-of-master Projects module.

The students that have at least 18 credits ECTS in the aquatic production speciality (including the subjects "culture of microalgae and zooplankton", "disease diagnostics", "water quality and management" and "aquaculture farm management"), and carry out their End-of-master Project as "enterprise internships" they will get the degree of "**MASTER in AQUACULTURE, speciality in AQUATIC PRODUCTION**"

The students that have at least 18 credits ECTS in the speciality of Biotechnology in aquaculture (including the subject "Experimental design and data analysis") and carry out their End-of-master Project as "introduction to research" they will get the degree of "**MASTER in AQUACULTURE, speciality in BIOTECHNOLOGY in AQUACULTURE**"

## MANDATORY MODULE (30 ECTS) 1st Year, 1st Term (afternoons: 16-20h)

Subject	Credits
Introduction to Aquaculture	3
Biology of cultured Algae	3
Physiology of Cultured Aquatic Animals	6
Genetics Applied to Aquaculture	3
Immunology of cultured animals	3
Pathology in aquaculture	6
Feeding and Nutrition	3
Biology of cultured aquatic animals	3

## Speciality in BIOTECHNOLOGY IN AQUACULTURE

Research orientation (30 ECTS)  
1st Year, 2nd Term (mornings: 10-14h)

Subject	ECTS
Genetic improvement	3
Management of genetic resources	3
Structural and functional genomics	3
Biotechnological applications in aquaculture	6
Development of tools for prevention and control	3
Tools for epidemiological analysis	3
Experimental design and data analysis	3
Phylogenetical analysis	3

## Speciality in AQUACULTURE PRODUCTION

Professional Orientation (30 ECTS)  
1st Year, 2nd Term (afternoons: 16-20h)

Materia	ECTS
Culture of seaweeds	3
Culture of microalgae and zooplankton	3
Culture of fish	6
Culture of bivalve molluscs	6
Culture of other invertebrates	3
Disease diagnostics	6
Water quality and management	3
Toxicology and toxic tides	3
Aquaculture farm management	3
Quality, processing, and traceability	3

## END-OF-MASTER PROJECT MODULE (30 ECTS) 2nd Year, 1st Term

Subject	Credits
End-of-master Project (mandatory)	6
Company Internships (optative) Professional Orientation in: Pescanova, Acuinova, Stolt sea Farm, Isidro de la Cal, Cluster de Acuicultura, Acuario A Coruña, etc	24
Introduction to research (optative) Research Approach in: University laboratories, CSIC, IEO, CIMA. Etc	24
Development of novel project (optative)	24



## Objectives

To provide the students the basic knowledge, skills and abilities that allow the students to design and carry out the labour and research activity in the aquaculture field. They will learn to design, manage and control different types of continental and marine aquatic facilities, evaluate their environmental impact and answer the R+D+i necessities by introducing strategies that allow the future development of the aquatic industry.

## Teaching organization

Lectures/seminars/conferences are taught mainly by teachers from the 3 universities through video conference from the university the teacher is giving the subject (A Coruña, Santiago or Vigo) to the other two universities. The students go to class in the university they enrolled, listening to the teacher on the spot or through video conference. Neither the students or teachers move from their universities for the theoretical teaching. There are three classrooms for the master with video conference in the three centres assigned to it:

- Faculty of Biology of the University of Vigo (Classroom 8, video conference 3).
- Institute of Aquaculture (mornings) and Faculty of Biology (afternoons) of the University of Santiago.
- Faculty of Sciences of the University of A Coruña.

Lectures/seminars/conferences that are taught by teachers from other research public organisms (IEO, CSIC, IGAFa, CIMA, etc.) and companies, are made from one of the three universities with the same modality described in the previous part or in those centres. Practical classes in universities, research centres or companies are carried out in the centre where the responsible teacher is in that moment.

## Inscription and enrollment schedule (Course 2024-2025) in UVigo (10 vacancies)

First inscription call (Spanish, europeans belonging to EEES, and foreigners)

July 1-7: Telematic pre-registration (no payment) in: <https://matricula.uvigo.es/loginX/login.asp>

July 18: Admitted provissional list

July 19-21: Complaints

July 24: Admitted final list, 1st call

July 26-29: enrollment confirmation (<https://matricula.uvigo.es/loginX/login.asp>)

Second inscription call (Spanish and europeans belonging to EEES)

August 23-28: Telematic pre-registration (no payment) in <https://matricula.uvigo.es/loginX/login.asp>

September 6: Admitted provissional list

September 7-9: Complaints

September 12: Admitted final list, 2nd call

September 13-16: enrollment confirmation (<https://matricula.uvigo.es/loginX/login.asp>)

If after the second call there are free vacancies, a third call could be open (preregistration September 23-25)

## Schedule (available in: <https://www.usc.gal/gl/estudos/masteres/ciencias/master-universitario-acuicultura/web-propia>)

The schedule of the first term is from 16-18h with two sessions (16-18h and 18-20h). The subjects are taught sequentially, thus there are two hours each day in alternate days during the necessary weeks. When one block of theoretical subjects is finished, the practical part starts and then their exams. Once one block is finished, a new one starts.

The second term subjects are also taught sequentially in the mornings (10-14h) in the speciality of biotechnology and in the afternoons (16-20h) in the speciality of production.

## Admission profile

**Priority:** Graduates (Spanish, Europeans from EEES or foreigners) in Biology, Marine Sciences, Veterinary or Environmental Sciences

**Others:** Graduates (Spanish Europeans from EEES or foreigners) in other degrees of Sciences (Chemistry, Pharmacy, Biotechnology, etc), Technology (Agronomical Engineer, forest engineer, etc) and Health Sciences.