



## INFORMATION

### Scientific committee:

Ike Olivotto, Coordinator  
Mario Giordano, President of the course board  
Oliana Carnevali, Scientific advisor

**Academic year:** 2016-2017

**Pre-Registration deadline:** November 7<sup>th</sup> 2016

**Registration:** December 1<sup>st</sup>-December 18<sup>th</sup>.

**Cost: 3000 euros.** The total price of the Master is 3000 euros. This includes classes, laboratory activities and a 8-day training on a coral reef in Indonesia (*Coral Eye research centre & Accommodation Bangka Island, North Sulawesi Indonesia* including full-board, 3 dives, unlimited snorkeling, diving equipment. **Airplane fare is NOT included**) or, alternatively, a 40 hrs laboratory training at the Università Politecnica delle Marche. Participants are requested to indicate their choice when registering.

### Website and online registration:

<http://www.disva.univpm.it/content/master-aquaculture>

### Contacts for more details:

**Telephone:** +39-0712204643  
**e-mail:** [master.aquaculture@univpm.it](mailto:master.aquaculture@univpm.it)



UNIVERSITÀ  
POLITECNICA  
DELLE MARCHE

## Department of Life and Environmental Sciences (DISVA)



**Master To become  
experts in Marine  
Ornamental  
Aquaculture**

## THE COURSE

In order to obtain the degree, the student must acquire 60 credits; each student must attend a minimum of 75% of classes and training sessions.

- 1) Lectures will be given by international experts in English (25 credits).
- 2) Training will consist of lab and/or field work (18 credits)
- 3) A research thesis is required for the attainment of the degree. The thesis work will be conducted under the supervision of an academic tutor (17 credits)

## Scope

This master's course intends to create a new professional profile for the **ornamental aquaculture** sector. Graduates will be able to design, manage and run a marine ornamental facility, in addition to have a comprehensive knowledge of the organisms, laws and regulations related to the marine ornamental trade. Great attention will be given to the sustainable culture of organisms as well as to system and tank design.

The course is intended for students that want to learn about ornamental aquaculture and gain field experience, and for professionals who want to improve their skills.

## Objectives

Participants will become acquainted with the main topics related to marine ornamental aquaculture including fish, coral, algae and aquatic plant biology, as well as facility design and management. As a result, after the successful completion of the program, the participants will be qualified to work for ornamental breeders, exporters, importers, public aquaria as well as conducting research, monitoring and management of natural marine environments.



## Class topics

- Marine ornamental trade
- Reproductive biology and aquatic biotechnology of fish
- Breeding and reproductive biology of Syngnathids
- Water chemistry and hatchery design
- Brood stock, larval and fish nutrition
- Coral culture and nutrition
- Production of live food
- Algae and aquatic plant physiology
- Infectious and parasitic diseases of ornamental fish and invertebrates
- Laws and rules for the ornamental trade

**Practical activities include the possibility to receive training on the Indonesian coral reef.**

## WHERE

*Theoretical Classes:*

**Università Politecnica delle Marche (UNIVPM)**, Dipartimento di Scienze della Vita e dell' Ambiente, via Breccie Bianche, 60131 Ancona, Italy. UNIVPM is among the best university in the country, with a long tradition in marine sciences. Ancona is an ancient city with a richness of monuments and artistic and natural attractions. The city is centrally located in Italy and can be easily reached by train, plane, car and ferries.



*Practical classes:*

- a) **UNIVPM laboratories**, with all facilities for morphological and functional studies on fish, invertebrates and photosynthetic organisms
- b) **Indonesian reef at the "Coral eye resort"**. Coral Eye is located on Bangka Island. Bangka is very well known for its idyllic beaches and famous dive sites that attract scuba divers from all over the world. The Center is well equipped for field and laboratory activities with a *dry lab*, a *wet lab*, a *reef lab* and *boats for diving and field activities*.

*Training:*

**Associated companies, universities and institutes**

## WHEN

The participants will register by November 7<sup>th</sup>, 2016. Classes will take place in the first part of the year (January-May 2017). Training will be conducted from May to September. The students will take their final exam in October.

## WHO

**Students:** The eligible student must be in possession of a bachelor degree (3 year course) and have an adequate background. The credential of the applicants will be evaluated by a selection committee, also through a brief interview (in person or in remote).

**Teaching staff:** a panel of international scientists and companies will provide the best possible ensemble of expertise and an international learning environment. The teaching staff comprises experts from Australia, USA, Canada, Mexico, Indonesia, Taiwan, Italy, Spain and Germany.

## Employment perspectives

- Ornamental Breeding companies
- Import/export companies
- Public aquaria
- Research Institutions
- Reef management agencies
- Coral farms
- Aquarium shops
- Environmental agencies
- Aquaculture companies

