

## Flyer MD Marine Biology and Aquaculture

### *Why ENROL?*

Because the **Master in Marine Biology** and Aquaculture will train you as **Sea Professionals**:

**Marine Conservation/Restoration Scientist and Specialist** able to manage various natural resources and to favour policymakers decision through the use of ecosystem services. These scientists and specialists look at how coastal and marine resources are being used to ensure that activities comply with current regulations in place to protect and restore the environment. They try to look for ways to improve the quality of an environment and ensure its sustainability for the future.

**Environmental Scientist and Specialist** able to monitoring aquatic environments to protect them by testing for contaminants an pollution, which in turn can negatively affect human health. You will be able to help in developing solutions to the clean-up and prevent future problems in the framework of **One Ocean, One Health**.

**Marine Biodiversity Specialist** able to monitoring marine environments understanding the interaction between living organisms and the environment, to evaluate the biological resources with strong expertise on Marine Protected Area management and governance.

**Aquaculture expert** able to manage and oversee aquaculture and mariculture facilities with expertise in the fishery and aquaculture products quality control.

**Marine Resources Manager** able to oversee teams of other scientists to coordinate their research efforts as they work to test or develop various products. Marine Resources Managers keep these projects running on-time and within budget, as well as update the client on any progress and findings.

**Scuba Diving patent.**

### *Mission*

The mission of **Master Degree in Marine Biology and Aquaculture** is to train highly specialize marine biologists capable of planning and executing marine ecosystem management including MPA and conservation strategies of the living aquatic resources used by fisheries and aquaculture, including biodiversity and ecosystem restoration and protection, with particular emphasis on most vulnerable and threatened species and habitats.

### **ENTRY REQUIREMENT**

The Master's Degree course is open to students with a first-cycle degree in: Biology and Biological Sciences, Natural Sciences, Environmental Sciences, Geological Sciences, Biotechnologies and any degrees awarded by foreign Universities that are recognize as being equal to a first-cycle degree.

## ***CURRICULA, ALL IN ENGLISH***

It is a stimulating mix of formal lectures, lab work and field trips.

The curricula (120 CFU) of the Master's Degree have been conceived to provide a broad range of professional skills and competencies. Our graduates will be at home both in basic science labs and in jobs involving scientific and technological innovation for the management and sustainable exploitation of marine and aquatic resources.

Subjects ECTS

### **I Year I Semester Both Curricula**

Physical and Chemical Oceanography	6
Biodiversity of Marine Environment and Monitoring	12
Marine Microbial Biodiversity	6
Algal Biology	6
Observational strategy and Scientific Diving	6

### **I year II semester Curriculum Marine Biology**

Marine Ecology	6
Developmental biology and physiology of marine organisms	12
Optional activity	6
<b>TOTAL I YEAR</b>	<b>60</b>

### **I year II semester Curriculum Marine Aquaculture**

Fishery ecology	6
Nutrition physiology and functional anatomy of fish	12
Optional activity	6
<b>TOTAL I YEAR</b>	<b>60</b>

### **II year Curriculum Marine Biology**

Marine Genomic	6
Biochemical adaptation to marine environment	6

Marine Animals Ecopathology	6
Optional activity	6
Internship	6
Thesis	30
<b>TOTAL II YEAR</b>	<b>60</b>

### **II year Curriculum Marine Aquaculture**

Pathology in aquaculture	12
Hygiene of aquatic productions	6
Optional activity	6
Internship	6
Thesis	30
<b>TOTAL II YEAR</b>	<b>60</b>

## ***JOB PROSPECT***

The course prepares for the profession of biologist, as regulated by the Law 24 May 1967, n. 396 and by the Presidential Decree 5 June 2001, n. 328, after passing the State Exam.

The object of the professional activity will consist in holding positions of high responsibility to be carried out independently; based on the chosen curriculum, it will concern:

- promotion, development and management of scientific and technological innovation in the marine environment in public and private research companies;
- basic and applied research activities in public and private companies engaged in the protection and management of marine resources (regional, provincial and municipal, ARPA);
- professional activities exercised in public entities engaged in the management and protection of coastal areas, marine protected areas, and in the recovery of polluted sites;
- professional activities exercised in environmental ecosystem services and consulting firms;
- dissemination of the acquired knowledge;
- participation in competitions for teaching in junior and high schools.

Or:

- management of areas intended for aquaculture activities;
- activities of care and strengthening of production activities in aquatic, natural and artificial environments;
- verification, reduction and adaptation of the environmental impact in aquaculture activities;
- activities for the enhancement of craft, artistic and cultural activities related to aquatic productions;
- dissemination of the acquired knowledge;
- participation in competitions for teaching in junior and high schools.