



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Applied Marine Geology

2021-2-F7502Q040

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#### Aims

To provide knowledge on the major geological hazards in marine and coastal environment, which are caused by geological processes that change dramatically the environmental conditions and present severe threats to coastal populations, offshore and onshore properties and offshore built infrastructures.

#### Contents

The course will provide basic knowledge about the use of innovative marine technologies to identify the marine geohazards and inherent risks and our ability to deal with them

#### Detailed program

Advanced Geophysical Marine Survey Methods with a focus on seismic acquisition offshore

Underwater geomorphological features

Introduction to marine geohazards, focused mainly on the coastal zone

Geohazard maps: use and protection of marine and coastal areas

Tutorials: 3D model reconstruction techniques using multibeam echosounder data and aerial structure from motion

## **Prerequisites**

Physics of the Sea; Fundamentals of Marine Physical Geography; International Law of the Sea

## **Teaching form**

2 credits (CFU) of frontal lessons

4 credits (CFU) of laboratory and practicals

During the COVID-19 restrictions the lessons, labs and practicals will be recorded and available online

## **Textbook and teaching resource**

E. Seibold, W.H. Berger -The Sea Floor: An Introduction to Marine Geology. Springer (e-book);

APAT – Atlante delle opere di sistemazione costiera. Manuali e Linee Guida; Journal of Coastal Research, v.20;

Erosion littorale en Méditerranée occidentale: dynamique, diagnostic et remèdes. CIESM Workshop Series 18

A selection of scientific journal articles and the lesson slides will be provided by the teacher

## **Semester**

First semester

## **Assessment method**

- Oral and Computer-based examination

Computer: practical test about multibeam or structure from motion processing provided by the teachers (on distance).

Marks are given as n/30. Minimum positive value is 18/30

During the Covid-19 restrictions the oral exams will be exclusively through the WebEx platform. A public link will be posted on the Geobiology e-learning page for the access of virtual public.

## **Office hours**

To make an appointment, please contact the teachers by e-mail:

[evinom@geol.uoa.gr](mailto:evinom@geol.uoa.gr)

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