



METHODS AND TECHNIQUES OF UNDERWATER ECOLOGY MOD 2

Enrollment year	2018/2019
Academic year	2019/2020
Regulations	DM270
Academic discipline	FIS/03 (MATERIAL PHYSICS)
Department	DEPARTMENT OF EARTH AND ENVIRONMENTAL SCIENCES
Course	NATURAL SCIENCES
Curriculum	PERCORSO COMUNE
Year of study	2°
Period	(02/03/2020 - 12/06/2020)
ECTS	3
Lesson hours	30 lesson hours
Language	Italian
Activity type	WRITTEN TEST
Teacher	MINZIONI PAOLO (titolare) - 3 ECTS
Prerequisites	Basic knowledge of physics (force, pressure, density, volume, speed) Basics water skills are required (floating without external supports, crawl, breaststroke)
Learning outcomes	<p>KNOWLEDGE AND UNDERSTANDING: The course will explain how the water influences different physical phenomena as wave propagation, heat transmission and gas behavior</p> <p>APPLYING KNOWLEDGE AND UNDERSTANDING: One of the course targets is to develop students ability to apply the theoretical concepts explained during the lessons to scuba-diving.</p> <p>MAKING JUDGEMENTS:</p>

Students will develop the ability to analyze pros and cons of different behaviours in theoretical scenarios. Additionally they will also be asked to continuously self-evaluate their performance during the in-water practical activities

COMMUNICATION:

Specific attention will be paid to the use of proper terms in verbal communication, and at the same time the importance of clear gestural communication underwater will be highlighted

LIFELONG LEARNING SKILLS:

A fundamental target of the course is making the students able to adapt their behavior according to the events and to the possible changes of underwater conditions.

Course contents

The course is divided in three parts: lessons which will be carried out in the classroom, practical activities in the swimming pool, practical activities in the sea.

Theoretical lessons will be dedicated to explain new concepts, while stressing their consequences for the practical activities.

On the other side, practical activities will focus on two objectives:

- 1) Experimental demonstration of previously described phenomena
- 2) Giving the students all the information required to carry out underwater surveys in safety conditions

Teaching methods

Lessons: 16 h/year
Practical activities: 14 h/year

Reccomended or required readings

CMAS P1-Manual

Assessment methods

The exam is composed by a written text (multiple choice + open-ended questions).

Improvements done during the practical activity in water will be subject to continuous evaluation

Further information

Sustainable development goals - Agenda 2030

[\\$lbl legenda sviluppo sostenibile](#)