CMAS

CONFÉDÉRATION MONDIALE DES ACTIVITÉS SUBAQUATIQUES

WORLD UNDERWATER FEDERATION

SCIENTIFIC COMMITTEE

Ocean Discovery Course (ODC)

2014

The non-professional CMAS Scientific Specialty Courses (SSC) combines the expertise of marine and freshwater scientists, underwater geologists and archaeologists, diving officers, administrators, legislators, individual divers, from different parts of the world scientific diving community. Therefore we revised the SSC Version 2000/01 with the colleagues in the Scientific Committee (SC) mentioned below, who helped to produce this new standards, and acknowledges the help and advice given by many other people through letters or oral comments.

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Ocean Explorer Course

Minimum 1 day
4 theoretical teaching units (TTU)
2 practical teaching units (PTU)
0-2 dives

1.1. Aim of course

- to introduce divers to marine life and marine sciences
- to increase awareness for marine life
- to promote the idea of sustainable diving and to create multiplicators for these ideas
- to introduce important marine animal and plant groups and their biology
- to increase the everyday personal experience of divers for marine ecosystems on the background of better knowledge on the interrelationships of its parts

1.2. Participants performance objectives

By the end of the course the diver should

- be able to explain why oceanology is a multidisciplinary's science.
- have some notions on ocean's formation and the geological time scale.
- be able to identify a small number local species (animals/plants)
- have acquired general knowledge on the species classification and the principal marine organisms
- understand the most important modes of reproduction in the ocean.
- be able to distinguish the principal biotope finding in diving activities.
- have notions on the composition of sea's water
- be able to understand the influence of the moon, the sun and physical characteristics of a basin on tides
- be able to understand why currents are forming in the ocean
- be able to estimate the depth according to the solar spectrum
- be able to understand the notion of ecosystem.
- could explain simply the food chain and her productivity
- be aware of the anthropogenic impacts

1.3. Prerequisites for participants

- age of 14 years -
- CMAS * or equivalent (only if dives are made)
- valid medical certificate (only if dives are made)

1.4. Instructor/participant ratios in open water

- depending on the visibility and diving level (only if dives are made)

1.5. Instructor requirement (see SC administrative text)

- CMAS Diver ** diving licence and 100 dives
- successful participation of a minimum level 1 Marine Biology Course
- successful participation in a course for multiplier with an exam
- great interest in the respective field and teaching abilities
- a high sensibility for sustainable diving

1.6. Speciality Course requirements:

- adequate lecture place

- adequate dive site (only if dives are made) or aquarium
- oceanology presentation
- oceanology scripts or text books

1.7. Theoretical teaching units

- the blue planet (water molecule, properties of water, distribution of water on earth)
- ocean's history, formation, movement and age
- ocean zones
- waves, currents, tides
- salinity, temperatures, density, light-penetrated layer, thermocline
- ecosystems (coastal zone/littoral, ocean floor/benthic zone, pelagic zone, deep sea, sandy seabed, rocky seabed, seagrass bed)
- coral reef
- the origin of life and scale of times
- organismal biology (algae, protozoa, plants, sponges, cnidarians and worms, molluscs, crustaceans, fishes, reptiles, mammals, birds) according the local conditions
- anthropogenic impacts to marine ecosystems (climate change, sea level rise, acidification, debris, litter, ghost nets, fishing long lines, overfishing, aquacultures, marine mining, oil drilling, toxic chemicals, offshore wind turbines)
- neobiota and invasive species

1.8. Practical teaching units

- observations at the dive site or visit to an aquarium

1.9. Certification

- control of success by the instructor
- all divers having successfully completed all components of the course will be issued with the appropriate CMAS Oceanology Course Card
- the brevet is valid permanently

All questions should be addressed to the
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