CMAS

CONFÉDÉRATION MONDIALE DES ACTIVITÉS SUBAQUATIQUES

WORLD UNDERWATER FEDERATION

CMAS Scientific & Sustainability Committee

Underwater Geology Course (UGC)

2018

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 last version with the colleagues in the CMAS Scientific & Sustainability 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.

CMAS Scientific & Sustainability Committee, 2018

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Underwater Geology Course

Minimum 2 days
6 theoretical teaching units (TTU)
6 practical teaching units (PTU)
2-4 dives

1.1. Aim of course

- to introduce divers to underwater geology
- to give them a sense of the size, the geological history and the variable coastlines in time and space of a 70 % covered water body of the earth.
- to make them susceptible to the constant changing of land and sea concerning transport and sedimentation of particles and solutions.

1.2. Student performance objectives

By the end of the course the diver should

- be familiar to the basic geological processes
- be able to identify important mineral groups and be able to recognize them
- dive sustainably due to his/her more comprehensive understanding of environment

1.3. Prerequisites for participants (minimum requirements)

- age of 14 years
- CMAS * or equivalent
- valid medical certificate

1.4. Instructor/student ratios in open water

- depending on the visibility and diving level

1.5. Instructor requirements (see SC administrative text)

- CMAS** diving licence and 100 dives
- academic background in the respective field, or
- several years professional experience in geology
- teaching abilities
- a high sensibility for sustainable diving

1.6. Speciality Course requirements:

- adequate lecture place
- adequate dive site
- identification books for minerals
- geology presentation
- geology scripts or text books
- teaching material (rock hammers, spades, sedi-compass, GPS, grabs, simple microscopes...).

1.7. Theoretical Teaching Units (the instructor sets thematic emphases)

- general introduction to marine geology
- distribution land and sea (horizontal and vertical)
- physical, chemical and dynamic geological processes.
- historical geology, ancient seas and ages of modern seas
- lithospheric fundament, origin of the earth, the waters, sea floor spreading, plate tectonics
- sea bottom - property of sedimentary rocks, distribution, structures
- rock forming organisms, reef structures, calcareous debris,
- silica producing organisms like sponges…
- sea regions and environments, coasts, shelfs continental slope and rise, deep sea bottom, ridges and seamounts, abyssal trenches
- mineral resources of the sea

1.8. Practical Teaching Units

- observations and sampling depending on the dive site

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 Underwater Geology Course Card
- the brevet is valid permanently

All questions should be addressed to the
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