



ACUC DEEP DIVER - Curriculum and Standard

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Foreword

The ACUC Deep Diver is an ACUC specialty. This course can be taught and certified by any ACUC Open Water Instructor or higher level that has previously requested and obtained from ACUC the status of ACUC Deep Diving Instructor. The candidates should be as minimum, ACUC Open Water Divers with at least 10 dives of experience, registered in their Dive Log Book. The main characteristics of this course are that the students that complete the course satisfactorily, will be able to dive, without supervision, accompanied by divers of any level, to the maximum depth allowed in Recreational Diving, which is 40 meters.

This is an ACUC International standard and therefore is always subject to the different national or local legislations. In cases where legislations exist that differ from this standard, the ACUC country or area delegation if it exist, must request in writing to the ACUC main office (Canada or Spain) a “**Deviation**” from this standard to satisfy the legislation of the area, supporting their request with the appropriate documentation. Deviations, if requested, to be considered valid, must appear at the end of each specific standard document (Point 12)

In cases where the local or national legislations are more restrictive than the ACUC Standard, then the local legislation will prevail, but if the ACUC Standard is more restrictive, then the ACUC Standard will prevail, because by complying with the more restrictive ACUC Standard, logically the local legislation will be also complied with.

Regarding required training hours, none are specified because these could vary depending on many factors (number of students, diving environment, etc), therefore the training hours needed are dependant on the fulfillment of learning objectives. In the ACUC manuals and documents where hours are specified, these are only to be considered recommendations.

1. Scope

This Standard specifies safety related minimum competencies to be achieved in recreational scuba training at the ACUC Deep diver level. This Standard applies only to contractual training and certification in recreational scuba diving.

2. Definitions

For the purposes of this standard and any other standard referenced as acuc-st-xxx, the following definitions apply. Please note that not all terms shown next might appear in this specific standard.

- 2.1 ACUC:** Entity providing recreational scuba diving training systems and certification.
- 2.2 basic equipment:** Equipment consisting of the following items:
 - < mask
 - < fins
 - < snorkel
- 2.3 breathing gas:** Appropriate mixture of oxygen and nitrogen.
- 2.4 certification:** Confirmation that a student has completed all requirements of a course according to this Standard, as issued by ACUC.
- 2.5 cold water:** Water less than 10°C from its highest average temperature or water of 10°C or less
- 2.6 competencies:** What a diver can do once certified
- 2.7 confined spaces:** condition that applies when there is no direct access to the surface, such inside a wreck, cave, etc.
- 2.8 confined water:** Swimming pool with a depth appropriate to the activity, or body of water that offers similar conditions (maximum depth 6 meters)
- 2.9 diving equipment:** Equipment consisting of the following items:
 - < mask,

- < fins,
- < snorkel,
- < cylinder,
- < regulator,
- < alternative breathing gas system, which could range from a simple octopus system to a duplicate breathing system with a separate breathing gas supply,
- < cylinder-support-system and buoyancy control device including (if appropriate) a quick release weight system,
- < submersible pressure gauge (breathing gas pressure monitor),
- < means to measure depth and time and to safely limit exposure to inert gas,
- < diving suit (if appropriate).

Note: Specific environments may require appropriate additional equipment (e.g. an underwater navigational aid, knife/cutting device).

2.10 dry specialty: Specialty course where no water training takes place, such as for example, First Aid, Oxygen Administration, etc

2.11 knowledge levels:

- < Basic: knows how...
- < Intermediate: knows how and why...
- < Advanced: knows how, why and also, knows how to teach it...

2.12 non certification scuba course: Scuba course where the participants do not receive an ACUC certification at the end of the course, such as for example, scuba introduction, scuba refreshment, scuba buoyancy, etc

2.13 open water: Body of water significantly larger than a swimming pool offering conditions typical of a natural body of water encountered in the region where training takes place.

2.14 prerequisites for training: What a diver needs or conditions to be met prior to start training

2.15 reduced visibility: condition that applies when diving at night or when visibility is less than an arm's length, for whatever the reason

2.16 scuba: Self-contained under-water breathing apparatus.

2.17 scuba instructor: A qualified individual, sanctioned by ACUC to teach, evaluate and certify divers.

2.18 theoretical knowledge: knowledge imparted in a dry environment (classroom, pool deck, etc)

2.19 training open water dive: open water training experience under direct supervision of a qualified instructor, comprising at least the following activities:

- < briefing
- < preparation to dive
- < pre-dive checks
- < entry into water
- < descent procedures
- < under-water activity
- < ascent and surfacing procedures
- < exit from water
- < debriefing
- < post dive procedures
- < recording the dive.

2.20 water skills: knowledge imparted inside a wet environment (pool water, sea water, etc)

3 Competencies of a certified, recreational ACUC Deep Diver

An ACUC Deep diver shall be trained to have sufficient competencies by knowledge, skill and experience to dive in open water with other scuba divers of similar level. ACUC Deep Divers shall dive within the following parameters

- < dive to a maximum depth of 40 meters / 130 feet
- < dive only when appropriate support is available at the surface,
- < dive under conditions that are equal or better than the conditions where they were trained.

If accompanied by an ACUC instructor, certified ACUC Deep divers may gain progressive experience beyond these parameters (except depth) and develop competency in managing more challenging diving conditions designed to lead to higher qualifications. Where further instruction is required this can only be provided by a suitably qualified ACUC instructor. Where only further experience is required, this may be supervised by an ACUC Divemaster or similar.

4 Prerequisites for training

In order to qualify for enrolment in a course according to this Standard the student shall meet the following prerequisites:

- 4.1 **Minimum age:** Age of Majority. ("Age of Majority" definition will be according to each country's legislation).
- 4.2 **Health requirements:** Students shall be medically screened as suitable for recreational diving by means of an appropriate medical examination, or if the country's legislation where the course is taken allows it, an appropriate questionnaire. In any case of doubt, students shall be referred to proper medical resources. If the student is not examined by a physician, the student should be obliged to confirm by signature a written information given by the instructor on diseases or physical conditions which may be a diving related risk. Students shall be advised of the importance of appropriate regular medical examinations.
- 4.3 **Previous certification:** ACUC Open Water Diver or similar with at least 5 hours (10 dives) bottom time experience.

5 Training Ratios

- < **Theory (classroom or pool):** No limit
- < **Confined Water:** 8 students per Instructor, with an additional 4 students per Assistant Instructor or Divemaster, with an absolute maximum of 16 students.
- < **Open Water:** 2 students per Instructor, with an additional 2 students per Assistant Instructor or Divemaster, with an absolute maximum of 4 students.

6 Introductory information

The following information shall be made available to the students prior to, or during the first class meeting.

- < prerequisites according to 4,
- < limitations of eventual qualification,
- < scope of course,
- < course procedures,
- < costs, insurance and contractual issues according to national regulations,
- < equipment requirements,
- < certification requirements according to 10,
- < diving related legislation and legal requirements.

7 Course content related to theoretical knowledge

- 7.1 **Equipment:** Students will have an intermediate level of theoretical knowledge regarding the use and handling of the diving equipment, especially the one related with this specialty
- 7.2 **Procedures:**
 - < Planning
 - < Descents and Ascents
 - < During the Dive

- 7.3 Narcosis:**
 - < Dalton's Law
 - < Symptoms
 - < Factors
 - < Limit
 - < Effects
 - < Adaptation
 - < Techniques and Exercises
- 7.4 Air Control:**
 - < Consumption
 - < Application of Consumptions
 - < Safety Margins
- 7.5 Decompression Accidents:**
 - < Henry's Law
 - < Types
 - < Speed of Ascent
 - < Factors
 - < Symptoms
 - < First Aid
 - < Prevention
 - < Haldane: Saturations and Tissues
 - < "M" Value
 - < Dissolution
- 7.6 Hypothermia:**
 - < Symptoms
 - < First Aid
- 7.7 Hiperoxia:**
 - < Types
 - < Lorraine Smith and Paul Bert
 - < UTP Calculations
 - < Symptoms
 - < First Aid
 - < NOAA Tables of Exposure to Oxygen
- 7.8 Decompression Tables:**
 - < Terminology
 - < ACUC Tables
 - < Bühlmann Tables
 - < U.S. Navy Tables
 - < Continuous Dives
 - < Speed of Ascent
 - < Safety Stops
 - < Decompression with Oxygen
 - < Omitted Stops
 - < Dive Order

8 Course content related to scuba skills.

- 8.1 Confined water scuba skills:** Students shall be able to perform the following skills. Each skill shall be mastered in confined water before that skill is performed in open water.
 - < Equipment assembly
 - < Assembly and use of additional tanks
 - < Double Tank use
 - < Buoyancy control
 - < Compass practices
 - < Buddy breathing exercises
 - < Equipment exchanges (tank and regulator) under the water
 - < Use of writing slates

- < Use of spools

8.2 Open water scuba skills: Students shall be able to perform the following skills in conditions typical of the local environment.

- < Placement of emergency equipment at depth
- < Instrument control
- < Use of diving computers
- < Buoyancy control
- < Assembly of Pony bottles
- < Exercises of narcosis control
- < Underwater Communication
- < Buddy breathing practices
- < Compass use
- < Decompression stops practice
- < Dive diagram preparation

9 Practical training parameters

- 9.1** All under-water skills in confined water shall be introduced, directly supervised and evaluated by an ACUC instructor, who shall be in the water during each session. The scuba instructor shall be in direct control of students throughout all sessions.
- 9.2** Before participating in open water dives a student shall have demonstrated sufficient theoretical knowledge and scuba skills in confined water to be able to perform the open water dives in the prevailing conditions.
- 9.3** The maximum depth during training dives shall not exceed 40 meters / 130 feet
- 9.4** During open water dives the student shall at least be equipped with diving equipment according to 2.9.
- 9.5** All open water dives shall be conducted during daylight hours in water that allows direct vertical access to the surface. Open water dives therefore shall not be conducted in under-water caves or below ice.
- 9.6** All under-water skills in open water shall be introduced, directly supervised and evaluated by an ACUC instructor. The scuba instructor shall be in the water and in charge of each open water dive.
- 9.7** As per clause 5, the absolute maximum number of students per scuba instructor in ideal conditions for supervision and escorting under water is two. The maximum number of students per qualified assistant for supervision and escorting under water is two. At no time shall a student in or under water be left without supervision.
- 9.8** Prior to open water dives the scuba instructor shall prepare an "emergency plan". In the immediate vicinity of the dive site there shall be:
- < a suitable first aid kit
 - < an emergency oxygen unit with a capacity of delivering at least 15 l/min. for at least 20 min.
 - < communication system suitable for alerting emergency services.
- 9.9** The scuba instructor shall cancel or abort the open water dive if environmental conditions or a student's physical or mental condition make this necessary.
- 9.10** A maximum of 1 daily training dive will be allowed

10 Assessment and certification requirements

- 10.1 Knowledge:** The student shall demonstrate, by means of the written test (**) supplied by ACUC, knowledge of scuba diving theory according to 7 and knowledge of skills according to 8.
- 10.2 Scuba Skills:** The student shall satisfactorily demonstrate to an ACUC instructor, the scuba skills according to 8.

(**) If for some reason, the student can not do a written test, then the Instructor can do an oral examination to the student based on the witten test provided by ACUC and if this is the case, the Instructor will transfer the student's oral answers to the written test. Whatever the case, the written test must be compleated, either directly by the student or indirectly by the Instructor, using the student's oral answers.

Instructors can, if they wish, offer additional tests to the student, however, the ACUC provided test must be done.

11 Training Dives

To be certified students shall complete at least **two** qualifying training open water dives under the direct supervision of an ACUC instructor. The underwater duration of each of these qualifying open water dives shall be at least 20 min.

12 Deviations

None requested