

# **DIVEMASTER STANDARDS**V0424

## **Special consideration points**

- Candidates must already be at least Rescue Divers
- A Civil Liability insurance covering the activities which the candidate will be performing is required.
- There are no ISO specific standards for this course; It is located, regarding academic knowledge and skills, between the ISO 24801-3 and the ISO 24802-1 standard.
- Regarding the RSTC Standards, it combines the academic and skills of the RSTC Recreational Dive Supervisor and the Recreational Assistant Instructor.
- Fourth mandatory course in the ACUC diver training system, and first mandatory professional level
- An ACUC Divemaster is qualified to assist in both, academic and water lessons, and integrates in one single level, Divemastering and Assistant Instructor duties and responsibilities.

#### **Foreword**

The ACUC Divemaster course is the **first** mandatory **professional** level within the ACUC training ladder. This course can be taught and certified by any ACUC Open Water Instructor or higher level. The main characteristics of this course is that the candidates who successfully complete the course, will be able to act as a **Dive Controller**, lead certified divers in open water dives as a **Dive Guide**, assist in the training of new divers, both in some of the **academic** (see point 7.13 in this document) and in some of the **skill** training portions of a course, **teach** some non-certification ACUC Scuba courses, such as the "Introduction to Dive" (in pool or confined water) and also, teach, evaluate and certify some "**dry" specialties** (specialties where no water training is involved), as long as the Divemaster holds the corresponding Specialty Instructor rating. Therefore, the ACUC Divemaster is an individual whose knowledge and training involves not only the academic and skills of a Divemaster, but also the academics and skills of an Assistant Instructor.

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 exists, must request in writing to the ACUC main office 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. 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, these could vary depending on many factors (number of candidates, diving environment, etc), therefore the real training hours needed are dependent on the fulfilment of learning objectives. Nevertheless, the candidate shall complete at least 40 hours of specialized training/evaluation. A minimum of thirty 30 hours of this training/evaluation is to occur under the supervision of a certified instructor. Keeping this minimum in mind, the actual training hours should be those needed to fulfil the training outlined in points 7 and 8 of this standard

# 1 Scope

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

#### 2 Definitions

For the purposes of the ACUC standards, the following definitions apply. Please note that not all terms shown next might appear in any one 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 the specific

standard, as issued by ACUC.

- **2.5 cold water:** Water less than 10°C / 50°F from its highest average temperature or water of 10°C / 50°F 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, certified by ACUC to teach, evaluate and certify divers.
- **2.18 theory knowledge:** knowledge imparted in a dry environment (classroom, pool deck, etc) **2.19 training definitions:** 
  - To observe: to be an observer in a course but without any type of participation
  - To assist: besides the above, to assist in the training of a course under the direct supervision of a higher level instructor
  - To train: besides all of the above, to train in a course without the need of a higher level instructor's supervision
  - To evaluate: besides all of the above, to evaluate by one self or with other evaluators, candidates' performances
  - To certify: besides all of the above, to issue candidates' certifications
- **2.20 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.
- **2.21 water skills:** knowledge imparted inside a wet environment (pool water, sea water, etc)

#### 3 Competencies of a certified, recreational ACUC Diversater

An ACUC Divernaster shall be trained to have sufficient competencies by knowledge, skill and experience to dive an act as a dive guide in open water of certified divers, to assist in the academic and practical skills training of new divers and to give some scuba non certification courses and dry specialty courses. ACUC Divernasters shall dive within the following parameters:

- Dive and lead divers to a maximum depth of 40 meters / 130 feet
- Dive and ensure that others dive only when appropriate support is available at the surface.
- Dive and ensure that others dive under conditions that are equal or better than the conditions where they were trained.
- Assist certified divers in new environments which the Diverseter is familiar with.

If accompanied by an ACUC instructor, certified ACUC Diversaters 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 or experience is required, this can only be provided by a suitably qualified ACUC instructor.

# 4 Prerequisites for training

To qualify for enrolment in a course according to this Standard the candidate shall meet the following prerequisites:

• Minimum age: 18 years.

- **Health requirements**: Candidates shall be medically screened as suitable for recreational diving by means of an appropriate medical examination. Candidates shall be advised of the importance of appropriate regular medical examinations.
- Previous Certification: ACUC Rescue Diver or ACUC Advanced Diver with the ACUC Rescue Specialty or similar, with at least 21 hours bottom time (42 dives) experience (see also clause 10: Assessment and Certifications Requirements). Also, must have current, or alternatively, do during the Divernaster course, the specialties of ACUC Diving Emergency Responder (DER), O2 Emergency Responder (O2ER) and Teaching Assistant specialty (alternatively to the Teaching Assistant specialty, the Instructor can provide the Teaching Techniques course as part of the Divernaster course). For the purpose of this standard, it is assumed that the candidates already have these specialties (or similar recognized by ACUC).
- **Documentation requirements**: Candidates must sign the ACUC Risk Release, the Safe Diving practices forms, The Ethical conduct form, etc... These forms are included in the Divernaster kit and also, are downloadable from the ACUC private website.

# 5 Instructor: Candidate Ratios during training

- Theory (classroom or pool): No limit
- **Confined Water:** 10 candidates per Instructor, with an additional 4 candidates per Divernaster, with an absolute maximum of 20 candidates.
- **Open Water:** 8 candidates per Instructor, with an additional 2 candidates per Divemaster, with an absolute maximum of 12 candidates.

# **6 Introductory information**

The following information shall be made available to the candidates 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 relating to theory knowledge

Candidates must already have the knowledge of a Rescue Diver, plus:

#### 7.1 The Divernaster and the Law: Candidates shall have a basic knowledge of:

- Legal Implications
- Negligence and duty of care
- Standard of care
- Liability Insurance
- · Waivers, Releases and Indemnity Agreements
- Minors
- Boat Charters
- Wrecks

#### 7.2 Decompression Tables: Candidates shall have an intermediate knowledge of:

- US Navy Tables
- Bülkman Tables

- DCIEM Tables
- 7.3 The Divemaster Mission: Candidates shall have an intermediate knowledge of:
  - Dive planning and Organization
  - Considerations regarding the dive area
    - o Ocean
    - o Lake
    - Quarry
    - o River
    - Niaht
    - o Ice
    - o Cave
    - o Boat
    - Deep (decompression situations)
  - Group Briefing
  - Pre Dive Organization
  - Control at Dive Site
  - Pre Dive Briefing
  - Pre Dive Check
  - Surface Support Organization
  - Water Entries
  - Dive Control
  - Water Exits
  - Debriefing
  - Divemaster Kit
- 7.4 Decompression and the Divernaster: Candidates shall have an intermediate knowledge of:
  - The Divemaster and Repetitive Dives
  - The USN Tables and the Divernaster
  - · Peculiarities of the USN Tables
  - Cold Water and High Altitude Problems
  - Dive Table Terminology
  - The Doppler Ultrasonic Bubble Detector
  - Planning Decompression Dives
- 7.5 Handling Diving Emergencies: Candidates shall have an intermediate knowledge of:
  - Prevention
  - Drugs
  - Contraindications to Diving
    - o Absolute
    - o Relative
    - Temporary
  - Emergency Situations and Procedures
  - First Aid Response
- 7.6 First Aid for Divemasters: Candidates shall have an intermediate knowledge of:
  - Elements of First Aid
    - o Case Management
    - o Golden Rules
    - o Problems
    - o Potential Dive Injuries
    - o Other Possible Problems
  - The Circulatory System
    - The Blood in the Organism
    - Some important notions
    - o Influence of the dive in the Circulatory System
  - The Respiratory System
    - Hematosys
    - Breathing Mechanical Processes

- The different respiratory capacities
- The First Aid Kit

#### 7.7 Searches: Candidates shall have an intermediate knowledge of:

- The Search
- Diver Search Patterns
- **Towing Methods**
- Body Recovering (check legislation, in many places this is not allowed to be done by recreational divers)

#### 7.8 Basic Seamanship related to Diving: Candidates shall have an intermediate knowledge of:

- Weather
- Safety Equipment
- Dive Flags
- Dives involving several boats
- Leaving the dive site
- Rules for ropes

#### 7.9 Dive Signals: Candidates shall have a basic knowledge of:

- Recall Signals
- Surface Signals
- Rope Signals
- Lights
- **Emergency Signals**

#### 7.10 Divemaster Log Book

#### 7.11 Physical Laws and their Effect Candidates shall have an intermediate knowledge of:

- **Buoyancy and Archimedes Principle**
- Thermodynamics: Basic Principles
- Dalton's Law: Its effect on diving
- · Henry's Law: Its effect on diving

## 7.12 Dive Compressors Candidates shall have a basic knowledge of:

- Basic Description
- How a high-pressure Compressor works
- Four Cylinder Compressor description
- How to use a Compressor to fill tanks
- Terminology

## 7.13 Teaching Techniques (added from the old Assistant Instructor level). Candidates shall have an intermediate knowledge of:

- Factors that affect the Learning Process
- Developing a Lesson Plan
- Relaxation Techniques
- Learning Laws
- **Building Confidence**
- Satisfying candidates needs
- Visualization Techniques
- Stress Recognisement
- **Theory Training Procedures**
- Skill Practical Training Procedures **Open Water Training Procedures**
- Teaching the ACUC Snorkel course

Additionally, The candidate shall demonstrate to a certified instructor theory lesson delivery skills for at least one theory class from points 7.1 to 7.12 (instructor's choice) above.

Note: if the candidate has the ACUC Teaching Techniques specialty there is no need to teach this section, however, the candidate's knowledge must be reviewed.

#### 7.14 ACUC Standards and procedures

# 8 Course content relating to scuba skills

**8.1 Confined water scuba skills**: Besides the already acquired Rescue Diver skills, candidates shall be able to perform, and demonstrate to an instructor, the following skills. Each skill shall be mastered in confined water before that skill is performed in open water:

- Dive planning and Organization
- Group Briefing
- Pre Dive Organization
- · Control at Dive Site
- Pre Dive Briefing
- Pre Dive Check
- Surface Support Organization
- Water Entries
- Dive Control
- Water Exits
- Debriefing
- Emergency Situations and Procedures
- Diver Search Patterns
- Towing Methods
- Teaching the ACUC Snorkel course

Additionally, The candidate shall demonstrate to a certified instructor personal scuba skills as outlined next for at least one confined water diving activity from the following topics:

- Diving system assembly and disassembly (at the water's edge)
- Proper weighting
- Mouthpiece clearing--snorkel and regulator
- Regulator retrieval
- Controlled descents and ascents
- Underwater swimming
- Mask clearing, including removal and replacement
- Underwater exercises--with and without mask
- Buddy system techniques
- Underwater and surface buoyancy control
- Surface-snorkel swimming with full diving system
- Surface operation of the quick release/emergency functions of the weight system underwater
- Removal and replacement of the weight/ballast system
- Removal and replacement of scuba system
- Equipment care and maintenance (at the water's edge)

**8.2 Open water scuba skills**: Besides the already acquired skills of a Rescue Diver, candidates shall be able to perform, and demonstrate to an instructor, the following skills in conditions typical of the local environment.

- Group Briefing
- Pre Dive Organization
- Control at Dive Site
- Pre Dive Briefing
- Pre Dive Check
- Surface Support Organization

- Water Entries
- Dive Control
- Water Exits
- Debriefing
- Diver Search Patterns
- Open Water Diver Rescue
- Towing Methods
- Teaching the ACUC Snorkel course

Additionally, The candidate shall demonstrate to a certified instructor personal scuba skills as outlined next for at least one open water diving activity from the following topics:

- Diving system assembly and disassembly (at the water's edge)
- Proper weighting
- Mouthpiece clearing--snorkel and regulator
- Regulator retrieval
- Controlled descents and ascents
- Underwater swimming
- · Mask clearing, including removal and replacement
- Underwater exercises--with and without mask
- Buddy system techniques
- Underwater and surface buoyancy control
- Surface-snorkel swimming with full diving system
- Surface operation of the quick release/emergency functions of the weight system underwater
- Removal and replacement of the weight/ballast system
- Removal and replacement of scuba system
- Equipment care and maintenance (at the water's edge)

## 9 Practical training parameters

- All underwater 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 candidates throughout all sessions.
- Prior to the first open water dive the candidate shall effectively show proof of, or demonstrate, to a scuba instructor the following watermanship skills, without the use of mask, fins, snorkel, or other swimming aids:
  - 300m / 985f distance swimming,
  - 10 minutes survival swim/float.
- Before participating in open water dives a candidate 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.
- The maximum depth during training dives shall not exceed 30 meters / 100 feet
- 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 underwater caves or below ice.
- During open water dives the candidate shall at least be equipped with diving equipment according to 2.9. (see the Definitions section)
- 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.
- As per clause 5, the absolute maximum number of candidates per scuba instructor in ideal conditions for supervision and escorting under water is eight. The maximum number of candidates per qualified assistant for supervision and escorting under water is two. At no time shall a candidate in or under water be left without supervision.
- 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 which delivers at least 15 l/min., for at least 20 minutes
- Communication system suitable for alerting emergency services.
- The scuba instructor shall cancel or abort the open water dive if environmental conditions or a candidate's physical or mental condition make this necessary.
- A maximum of 3 daily training dives will be allowed

## 10 Assessment and certification requirements

- Knowledge: The candidate shall demonstrate, by means of the written exam¹ supplied by ACUC, knowledge of scuba diving theory according to 7 and knowledge of skills according to 8. For all professional levels (Divernaster and higher) these exams and related students' documents must be kept by ACUC for as long as the professional is in active status with ACUC and for at least 7 years after passing to inactive status.
- **Scuba Skills**: The candidate shall satisfactorily demonstrate to an ACUC instructor, the skills according to 8.
- Minimum Dives: The candidate must have at least 40 hours (around 80 dives) of bottom time before obtaining the certification. The dives taken as the check-out dives in the Open Water Diver, the Advanced Diver, the Rescue Diver and the dives done during this course can be counted for the total dives required to obtain the certification.
- **Presentations**: The candidate shall do at least one presentation each for academic (classroom or dry), confined water and open water in at least one real or simulated open water diver course (three presentation total).

# 11 Training Dives

To be certified, candidates 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 30 min, except in cases of cold water where 20 minutes will suffice.

#### 12 Candidate's certification

Candidates will be certified as ACUC Divernasters when they have complied with all the requirements. These include:

- Minimum 80 Open Water Dives (40 hours bottom time)
- Pass the ACUC Diversater written examination
- Successfully complete the Check-out dives for the ACUC Diverseter course

## 13 Candidate's qualifications

Once completed the course, the ACUC Divernaster will be able to:

- Dive up to a maximum depth of 40 meters and always accompanied by at least another certified diver.
- Be able to guide groups of certified divers in open water without supervision.
- Be able to guide groups of student divers in open water under the direct supervision of an Instructor
- Be able to teach snorkel diving without supervision

<sup>&</sup>lt;sup>1</sup> If for some reason, the candidate cannot do a written exam, then the Instructor can do an oral examination to the candidate based on the written exam provided by ACUC and if this is the case, the Instructor will transfer the candidate's oral answers to the written exam. Whatever the case, the written exam must be completed, either directly by the candidate or indirectly by the Instructor, using the candidate's oral answers. Instructors can, if they wish, offer additional exams to the candidate, however, the ACUC provided exam must be done.

- Be able to teach some parts of scuba diving courses, both academic and practical, with direct supervision of an Instructor.
- Be able to teach any "dry" (no water involved) specialties for which the Diversater holds or obtains the Specialty Instructor certification

# 14 Deviations

For South Korea, because of local legislation indicating that O2 providers must have some type of medical degree, the O2 Provider course is not mandatory.